WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON AGRICULTURAL EXPERIMENT STATION

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
APR. 1, 1962

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Cooperative Snow Survey and Water Supply Forecast Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
Colorado and State of Utah	Monthly (Jan.-June)	Salt Lake City, Utah	Utah State Engineer and Other Agencies
Columbia	Monthly (Jan.-May)	Boise, Idaho	Idaho State Reclamation Engineer
Upper Missouri and State of Montana	Monthly (Feb.-June)	Bozeman, Montana	Mont. Agr. Exp. Station
West-Wide	Oct. 1, Apr. 1, May 1	Portland, Oregon	All Cooperators
STATES			
Alaska	Monthly (Mar.-May)	Palmer, Alaska	Alaska S.C.D.
Arizona	Semi-Monthly (Jan.15 - Apr.1)	Phoenix, Arizona	Salt R. Valley Water Users Assoc. Ariz. Agr. Exp. Station
Colorado and New Mexico	Monthly (Feb.-May)	Fort Collins, Colorado	Colo. Agr. Exp. Station Colo. State Engineer N. Mex. State Engineer
Idaho	Monthly (Feb.-May)	Boise, Idaho	Idaho State Reclamation Engineer
Nevada	Monthly (Jan.-May)	Reno, Nevada	Nevada Dept. of Conservation and Natural Resources Division of Water Resources
Oregon	Monthly (Jan.-June)	Portland, Oregon	Ore. Agr. Exp. Station Oregon State Engineer
Washington	Monthly (Feb.-June)	Spokane, Washington	Wn. State Dept. of Conservation
Wyoming	Monthly (Feb.-June)	Casper, Wyoming	Wyoming State Engineer

Copies of these various reports may be secured from:

Head, Water Supply Forecasting Section
Soil Conservation Service
P.O. Box 4170, Portland 8, Oregon

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
British Columbia	Monthly (Feb.-June)	Comptroller, Water Rights Br., Dept. of Lands and Forests, Parliament Blog., Victoria, B.C., Canada
California	Monthly (Feb.-May)	Calif. Dept. of Water Resources, Sacramento, Calif.

USDA-SCS-PORTLAND, OREG. 1981

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for
OREGON

ISSUED

APRIL 8, 1962

Report prepared by

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and

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BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA..... AREA 2

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY..... AREA 3

UPPER JOHN DAY..... AREA 4

UPPER DESCHUTES, CROOKED..... AREA 5

HOOD, MILE CREEKS, LOWER DESCHUTES..... AREA 6

LOWER COLUMBIA..... AREA 7

WILLAMETTE..... AREA 8

ROGUE, UMPQUA..... AREA 9

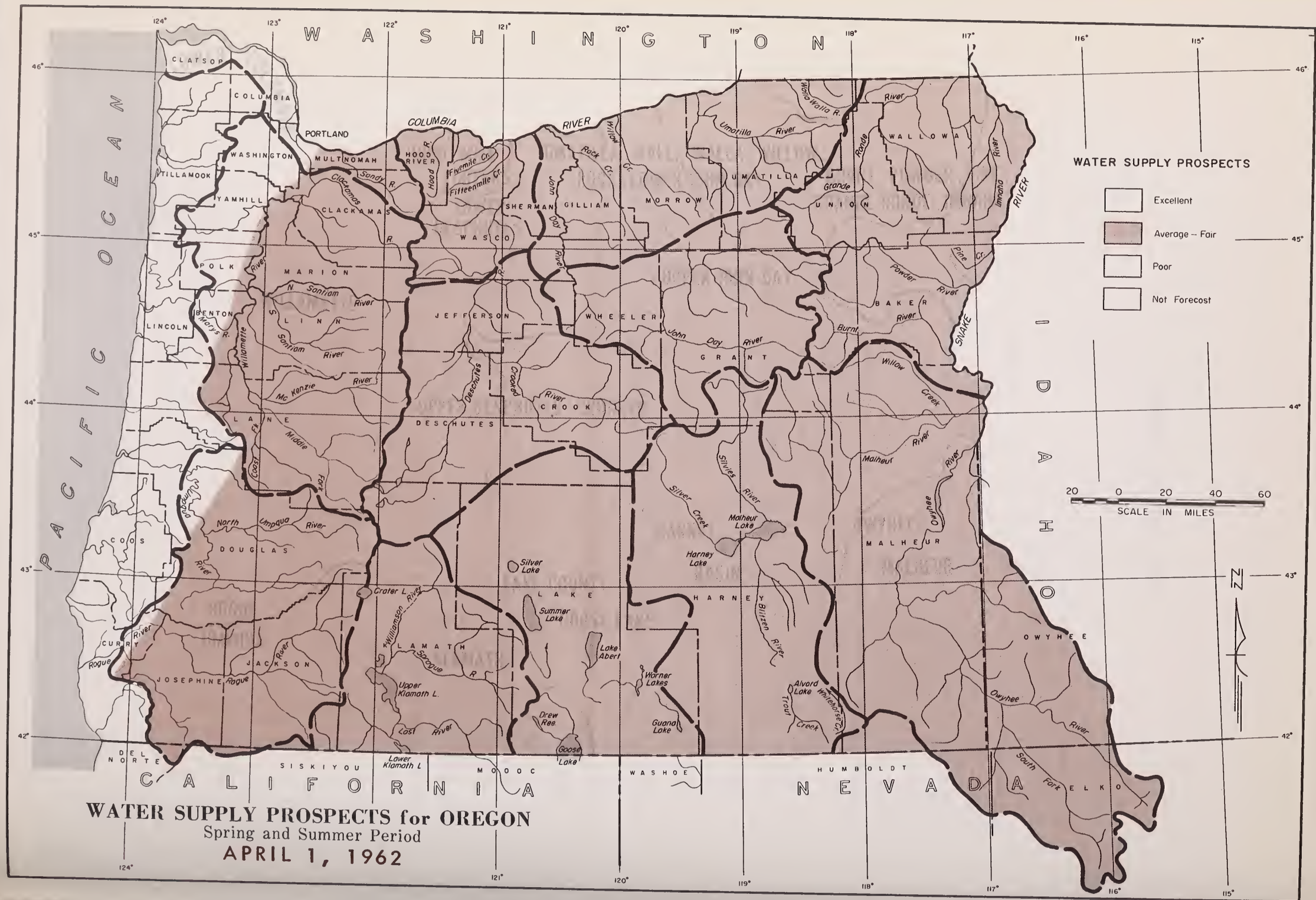
KLAMATH..... AREA 10

LAKE COUNTY, GOOSE LAKE..... AREA 11

HARNEY BASIN..... AREA 12

MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)

LIST OF COOPERATORS.....INSIDE BACK COVER



WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

APRIL 1, 1962

WATER SUPPLY OUTLOOK for OREGON

APRIL 1, 1962

All of Oregon's 1,400,000 acres of irrigated land can expect nearly adequate to adequate water supplies in the 1962 season. Lands served from McKay reservoir in Umatilla County and Drews reservoir in Lake County, where stored water supplies are extremely "short", will have sufficient water for most crop requirements if careful water management is practiced.

SNOW COVER:

Water content of the mountain snowpack in Oregon varies from 87 to 93 percent of the 15 year average (1943-57) in the northwest corner of the state, to 114 to 155 percent of average in the southeast watersheds.

Statewide, the snowpack now averages 2 percent above the April 1st normal for April 1. Heavy March storms brought the snowpack accumulation up to 2 percent above average from a point 12 percent below average.

SOIL MOISTURE:

Moisture in the watershed soil-mantle, the top 3 or 4 feet under the mountain snowpack, is adequate in all areas up to 5000 feet elevation. At higher elevations, the soils are still relatively dry but will be "recharged" by snowmelt water.

RESERVOIR STORAGE:

Water stored in 20 major irrigation reservoirs is 27 percent below the April 1 average and still 18 percent below the amount in storage one year ago. Inflow in the next three months should be sufficient to provide additionally needed water if "water stretching" is carefully practiced.

STREAMFLOW:

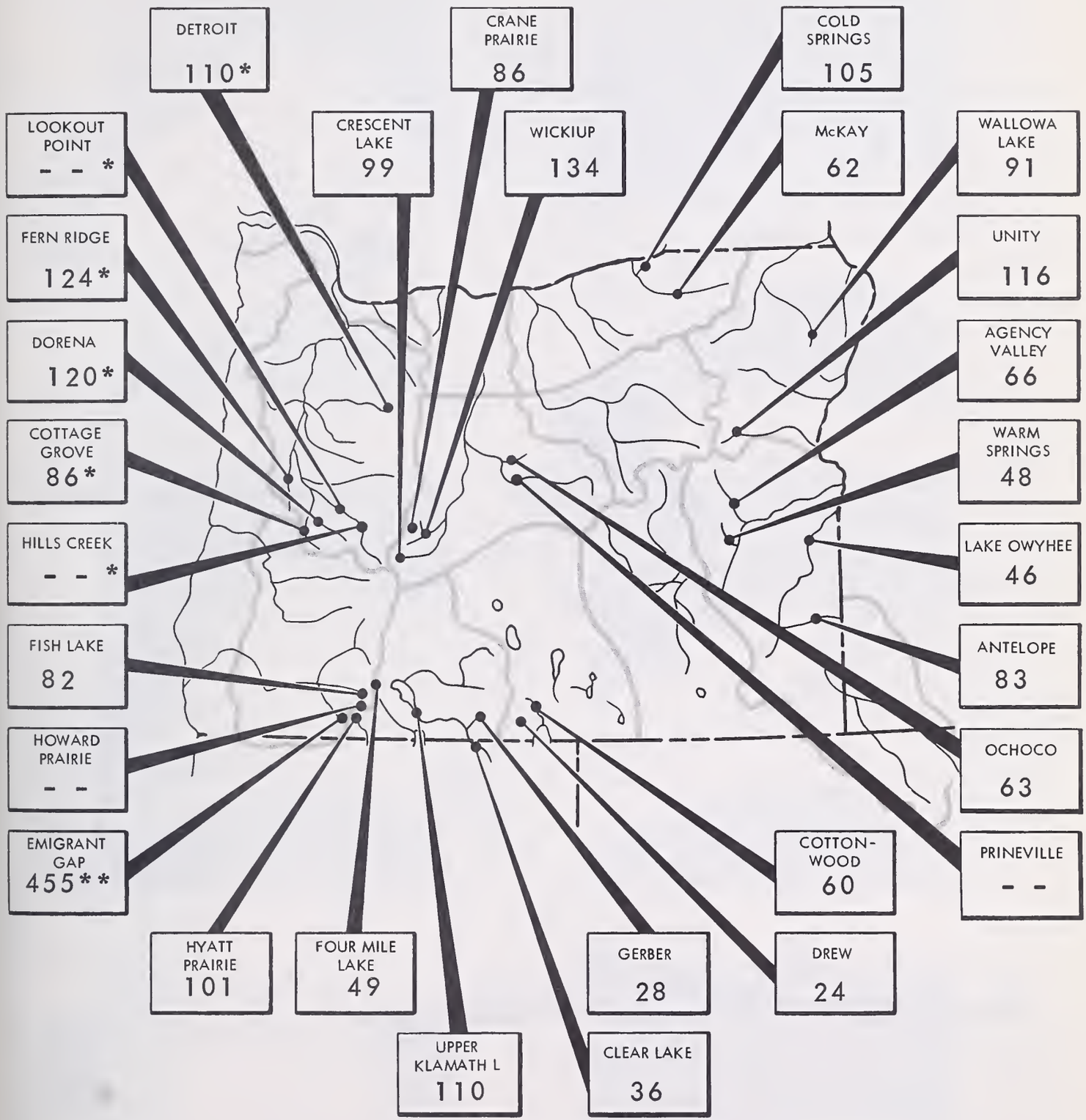
Nearly all forecasts of streamflow have been increased over those presented one month ago as a result of excellent snowfall during March.

Streamflow forecasts vary from 80 percent of the 1943-57 average on the Owyhee River to highs of 148 percent of average on Trout Creek in southern Harney County and 138 percent for inflow to Gerber and Clear Lake reservoirs on the head of Lost River in eastern Klamath County.

All forecasts assume average precipitation and temperature during the runoff period.

STORAGE STATUS of OREGON RESERVOIRS as percent of 1943-57, 15 year average

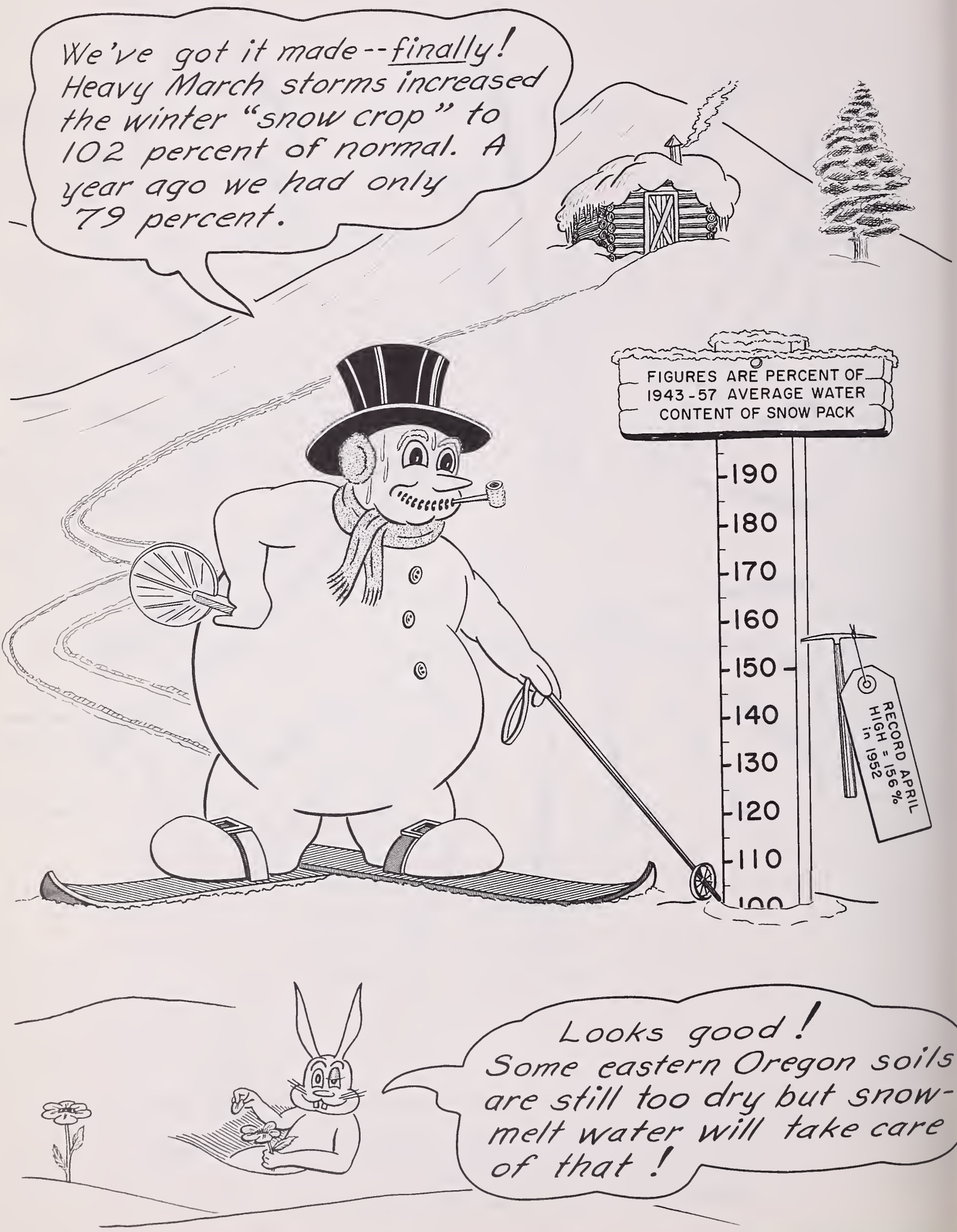
APRIL 1, 1962



*- *Multiple purpose reservoir - space reserved primarily for flood runoff.*
N.R. - *No report.*
** - Capacity of reservoir greatly increased but current storage compared with previous average.
-- Short record - no average for comparison

OREGON SNOW PACK ACCUMULATION

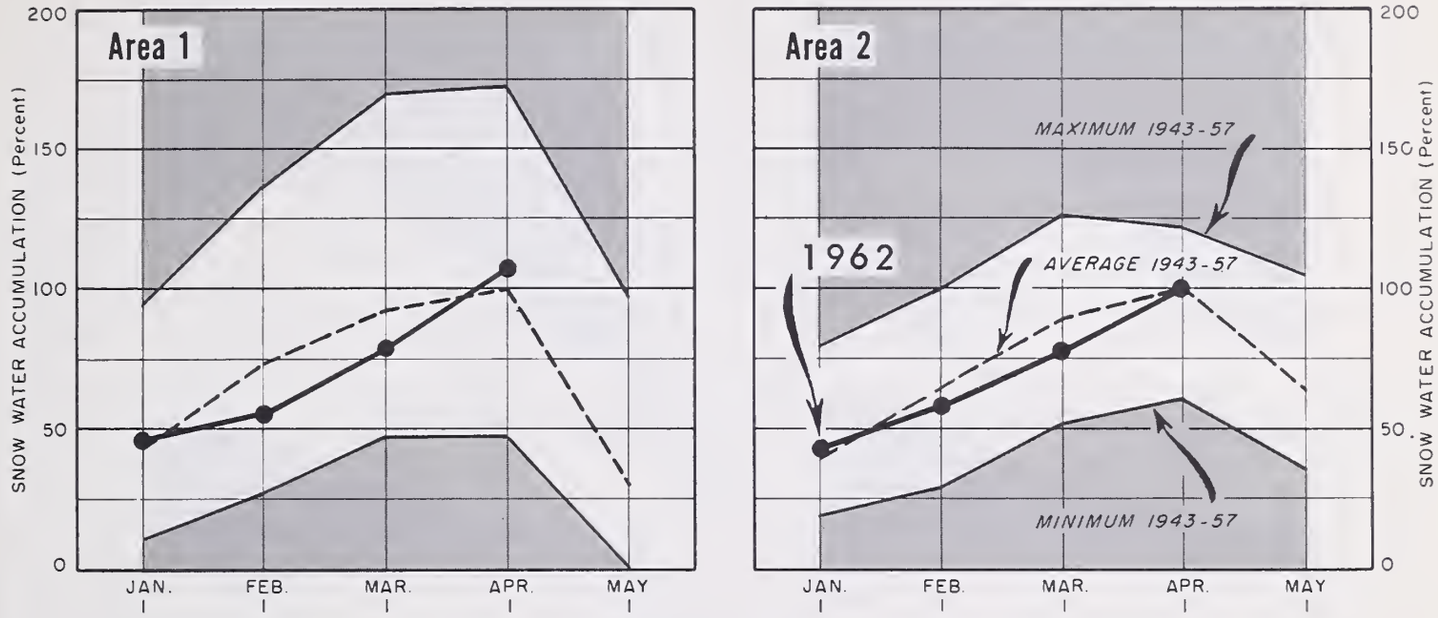
AS OF APRIL 1, 1962

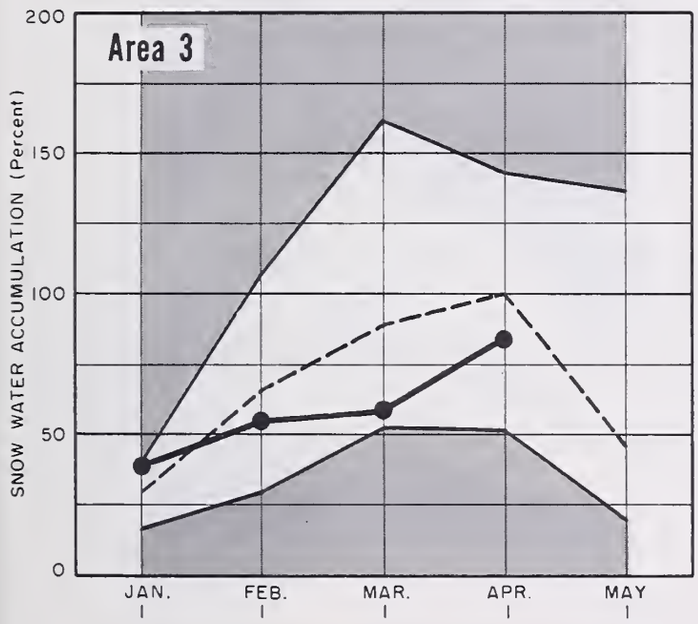


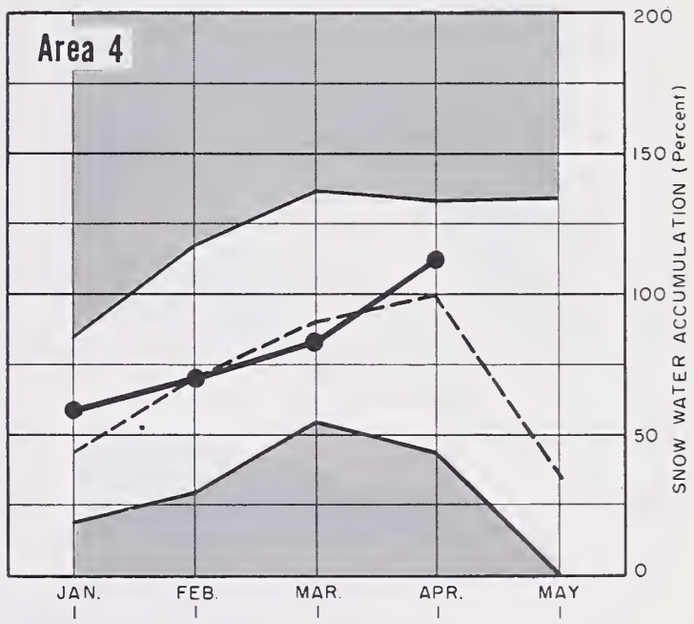
SNOW WATER ACCUMULATION in OREGON

(Percent of average maximum accumulation)

APRIL 1, 1962

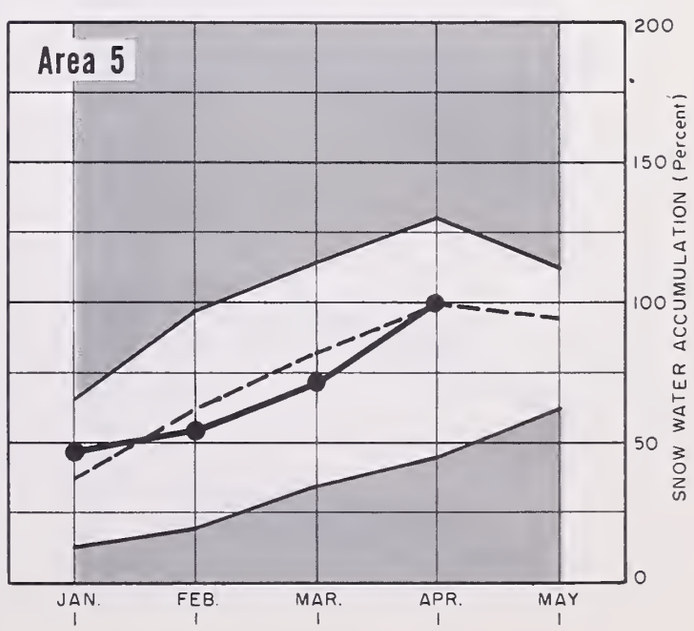






WATERSHED AREA LOCATIONS

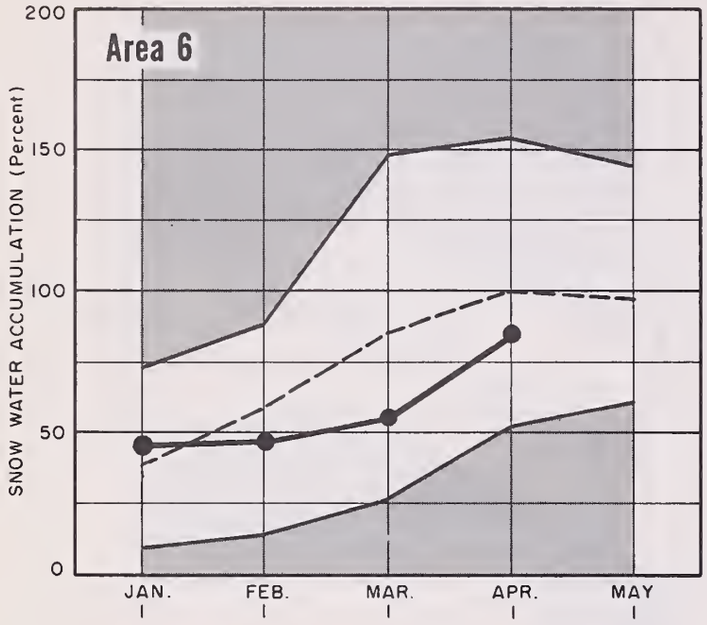
AREA 1 . OWYHEE, MALHEUR WATERSHEDS
AREA 2 . BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
AREA 3 . UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
AREA 4 . UPPER JOHN DAY WATERSHEDS
AREA 5 . UPPER DESCHUTES, CROOKED, WATERSHEDS
AREA 6 . HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
AREA 7 . LOWER COLUMBIA WATERSHEDS
AREA 8 . WILLAMETTE WATERSHEDS
AREA 9 . ROGUE, UMPQUA WATERSHEDS
AREA 10 . KLAMATH WATERSHEDS
AREA 11 . LAKE COUNTY, GOOSE LAKE WATERSHEDS
AREA 12 . HARNEY BASIN WATERSHEDS

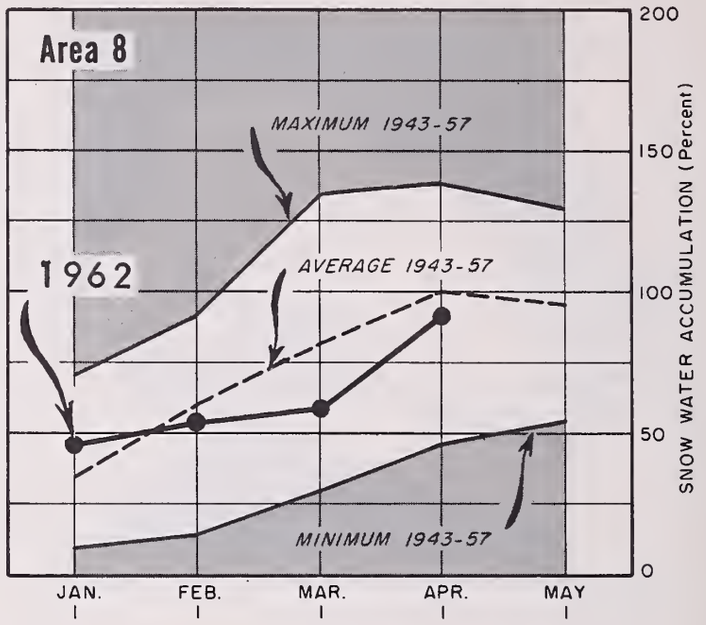


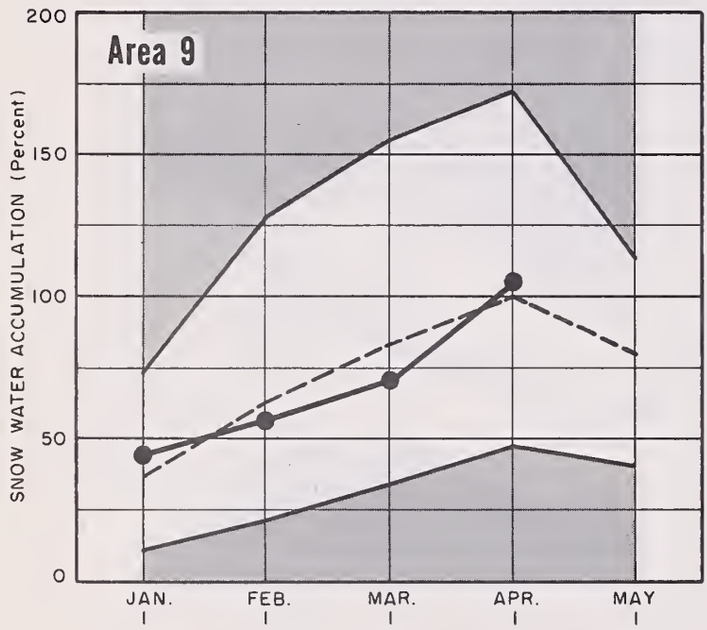
SNOW WATER ACCUMULATION in OREGON

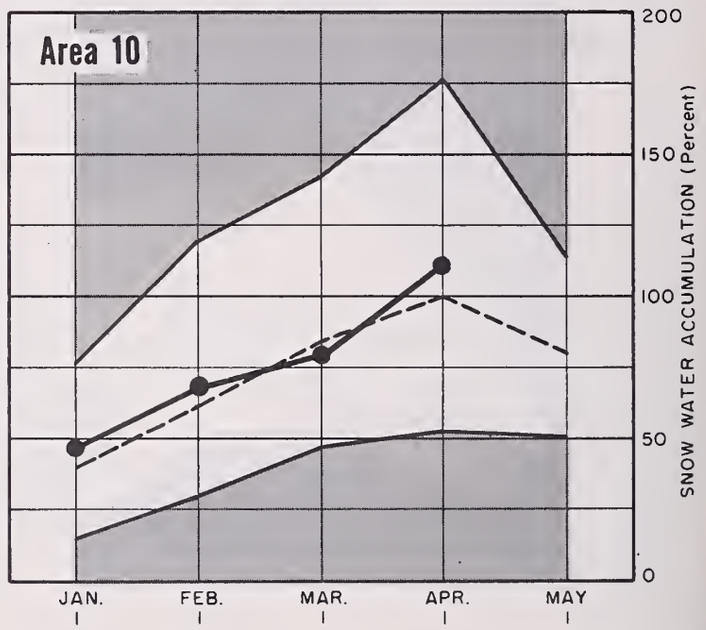
(Percent of average maximum accumulation)

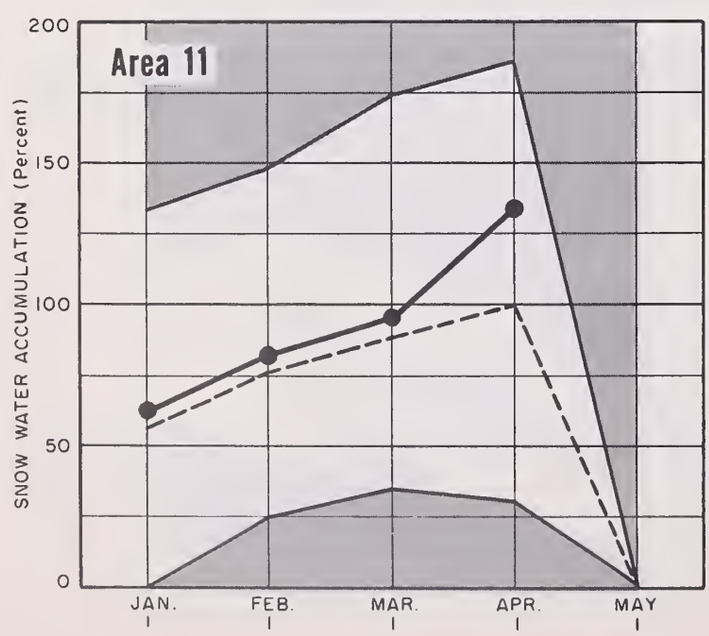
APRIL 1, 1962

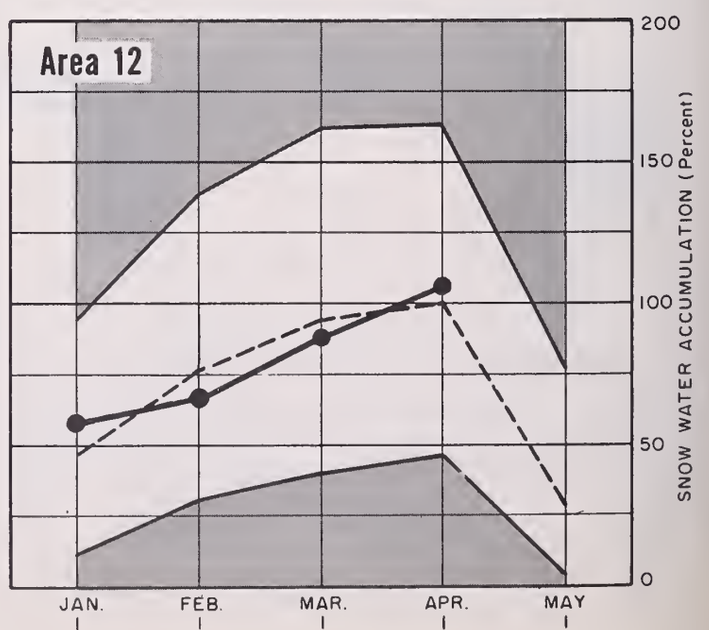






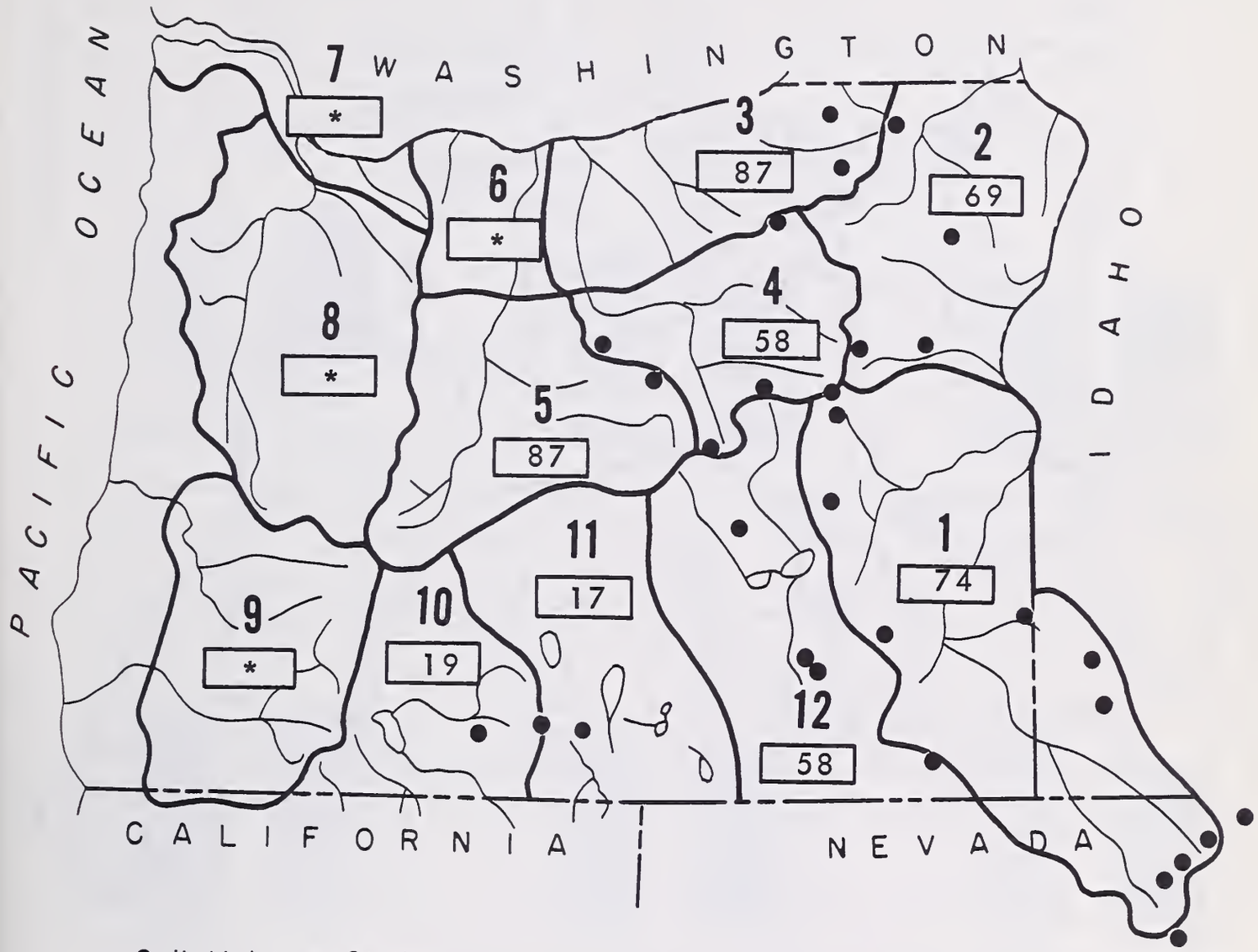






MOUNTAIN SOIL MOISTURE in OREGON
as percent of available capacity

APRIL 1, 1962

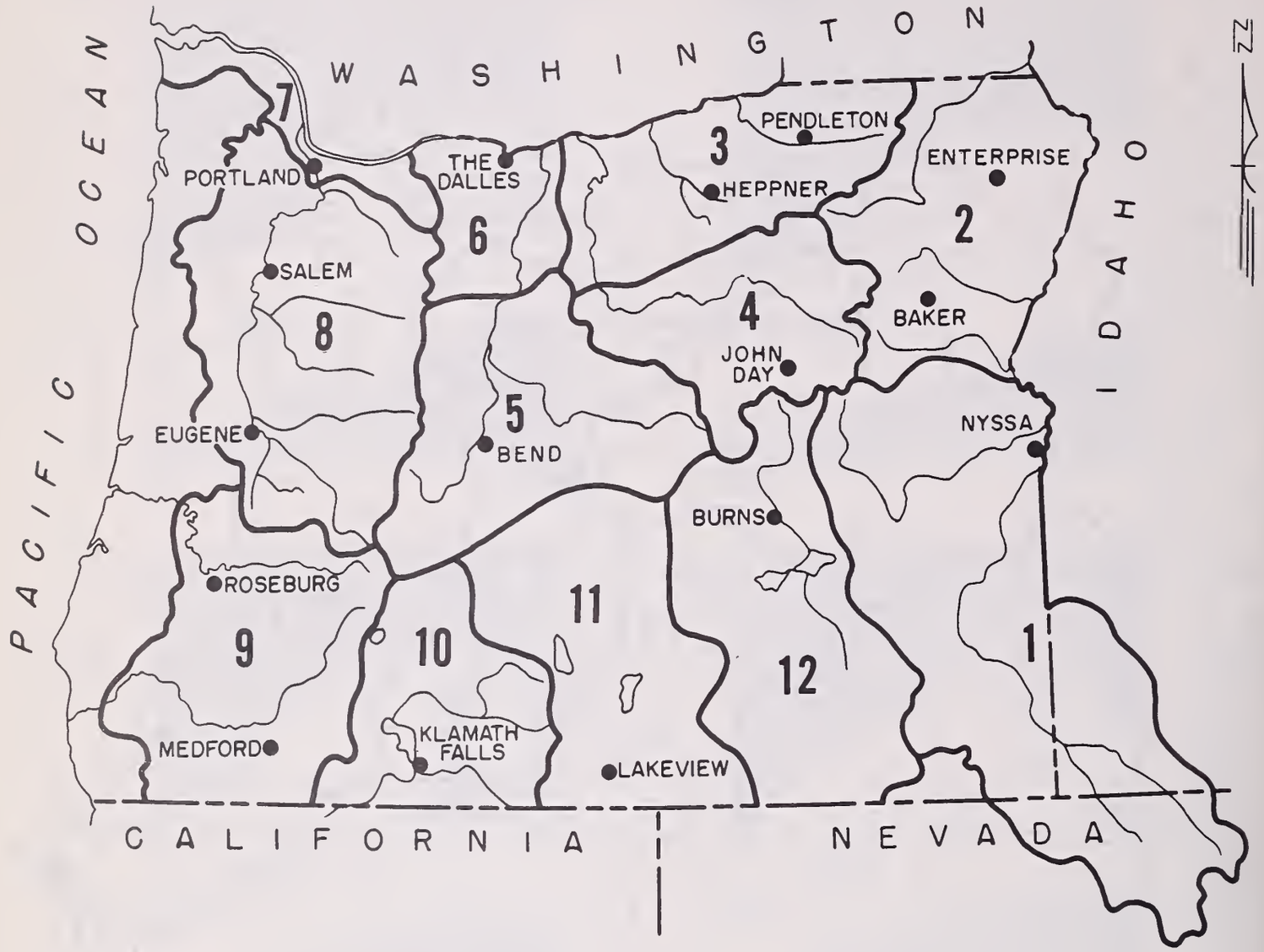


● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON [a]

APRIL 1, 1962

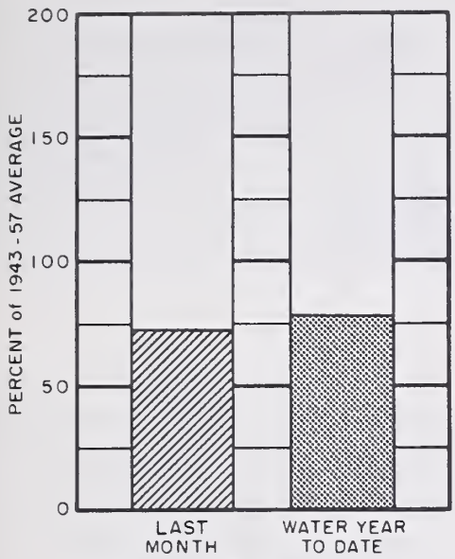


PRECIPITATION as PERCENT of the 1943-57 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE [b]	STATION	LAST MONTH	WATER YEAR TO DATE [b]
Baker Apt.	88	130	Lakeview	121	106
Bend	149	106	Medford Apt.	91	79
Burns	138	125	Nyssa	72	101
Enterprise	84	115	Pendleton Apt.	105	75
Eugene Apt	156	100	Portland Apt.	116	75
Heppner	92	76	Roseburg Apt.	124	88
John Day	71	92	Salem Apt.	119	72
Klamath Falls Apt.	137	107	The Dalles	137	91

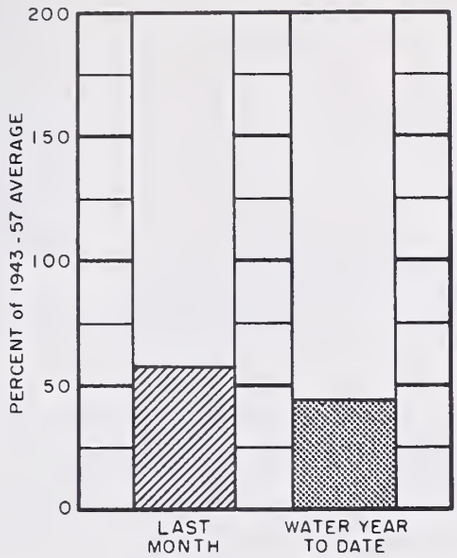
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

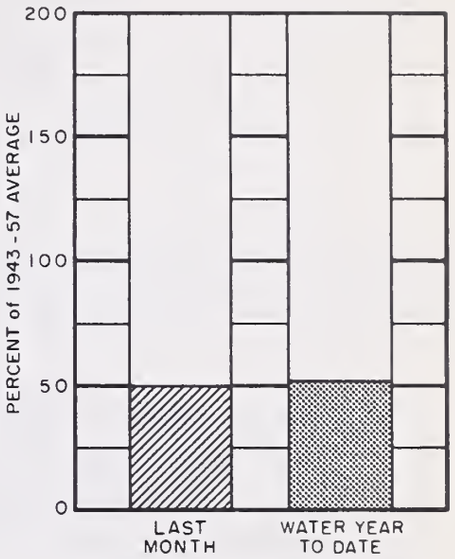
APRIL 1, 1962



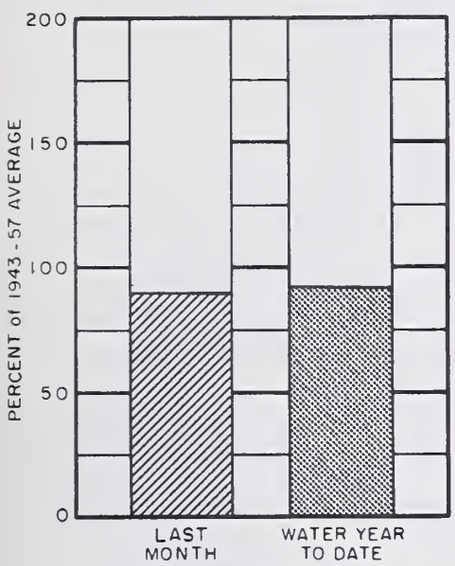
Owyhee Lake net inflow



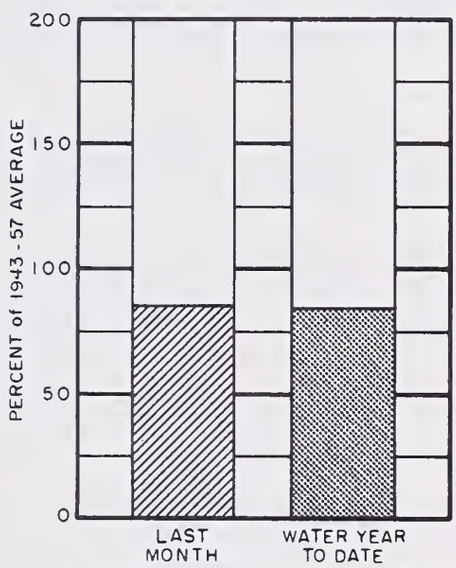
Umatilla near Umatilla



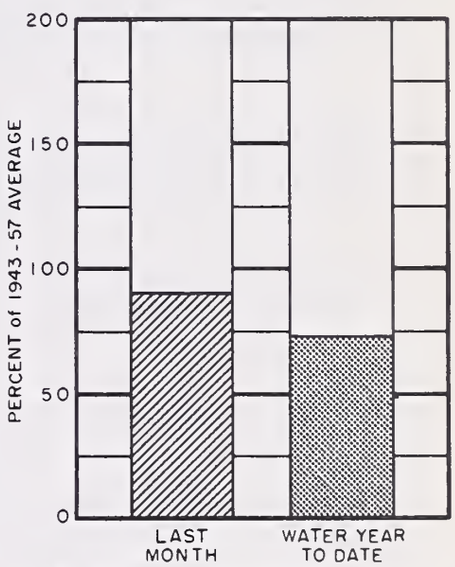
John Day at Service Creek



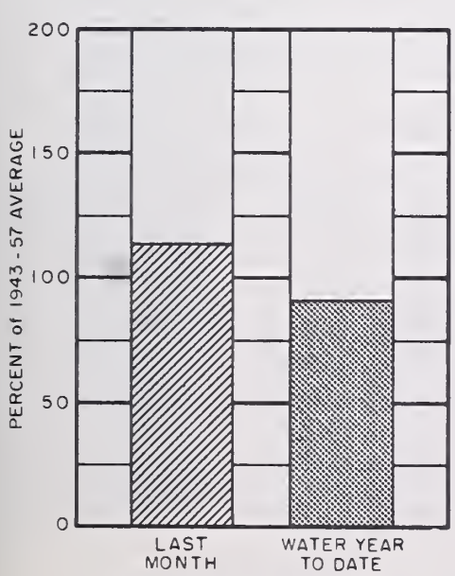
Deschutes at Moody



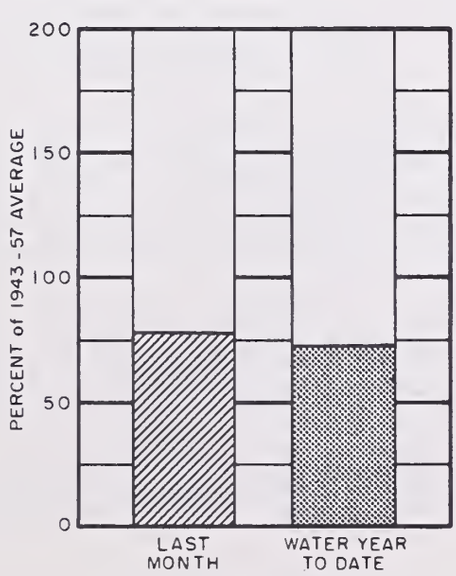
Hood and conduit near Hood River



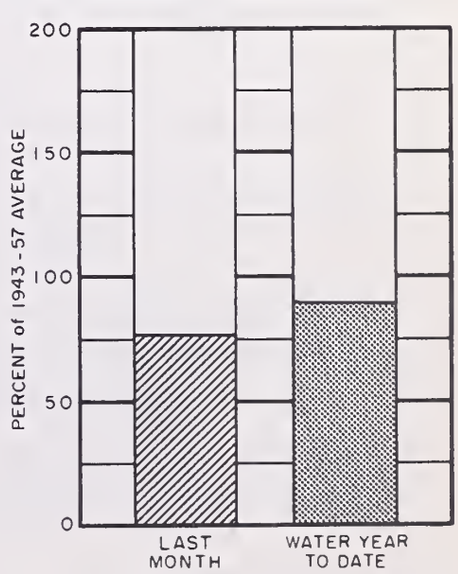
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The California Oregon Power Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1962 irrigation water outlook in Malheur County has improved to one of adequate water supplies with the possibility of some carryover of stored water for the next season. March storms made unusually heavy contributions to the mountain snowpack in this part of the state but storage in reservoirs is still very short.

SNOW COVER - Water content of the snow in the north half of the county is 7 percent greater than the April 1st average for the 15 year period 1943-57 and 65 percent greater than last year.

In the Owyhee watershed the snow water content is 30 percent greater than average and 60 percent greater than last year. Snow in this section of the county is reported to be heavily drifted.

SOIL MOISTURE - Moisture in the top 3 to 4 feet of soils under the snowpack is 78 percent of capacity on the Owyhee watersheds. This is slightly greater than the 74 percent observed last year at this date.

Soil moisture on the Malheur River watershed is only 49 percent of capacity compared with 73 percent last year.

RESERVOIR STORAGE - Storage in the Owyhee reservoir is about 250,000 acre feet compared with about 322,000 a.f. a year ago but expected inflow will be sufficient to provide water for near adequate irrigation.

Combined storage in Agency Valley and Warmsprings reservoirs is 83,400 acre feet which is about the same as available one year ago.

Expected inflow to these reservoirs will provide enough water for average irrigation in the Warmsprings and Vale-Oregon Irrigation Districts.

STREAMFLOW - Inflow to Owyhee reservoir for the April-September period is forecast at 345,000 acre feet or 80 percent of the 15 year (1943-57) average.

North Fork of the Malheur is forecast at 95 percent average or 61,000 acre feet in the next 6 months. Similarly, a 93 percent average forecast for the Malheur near Drewsey will produce 75,000 acre feet in the April-September period.

Willow and Bully Creeks should have water supplies better than last year and similar to 1960. Jordan Valley Irrigation District should have a satisfactory water supply.

Report prepared by
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209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Average	Average
Bully Creek	Average	Fair
Cow Creek	Average	Fair
Jordan Creek	Average	Average
Jordan Valley Irrig. Dist.	Average	Average
McDermitt Creek	Average	Average
Oregon Canyon Creek	Average	Average
Owyhee Project	Average	Average
Succor Creek	Average	Average
Ten Mile Creek	Average	Average
Vale Oregon Irrig. Dist.	Average	Average
Warmsprings Irrig. Dist.	Average	Average
Willow Creek	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Agency Valley	60.0	29.8	34.3	45.4
Antelope	55.0	15.2	- -	18.3
Owyhee	715.0	249.5	321.8	539.0
Warmsprings	191.0	53.6	51.0	110.7

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
2140	Malheur near Drewsey	75	April-Sept.	81	93
		74	April-July	80	92
2175	Malheur, North Fork at Beulah[d]	61	April-Sept.	64	95
1825	Owyhee Reservoir net Inflow[g]	345	April-Sept.	430	80
		330	April-July	412	80

AVAILABLE SOIL MOISTURE

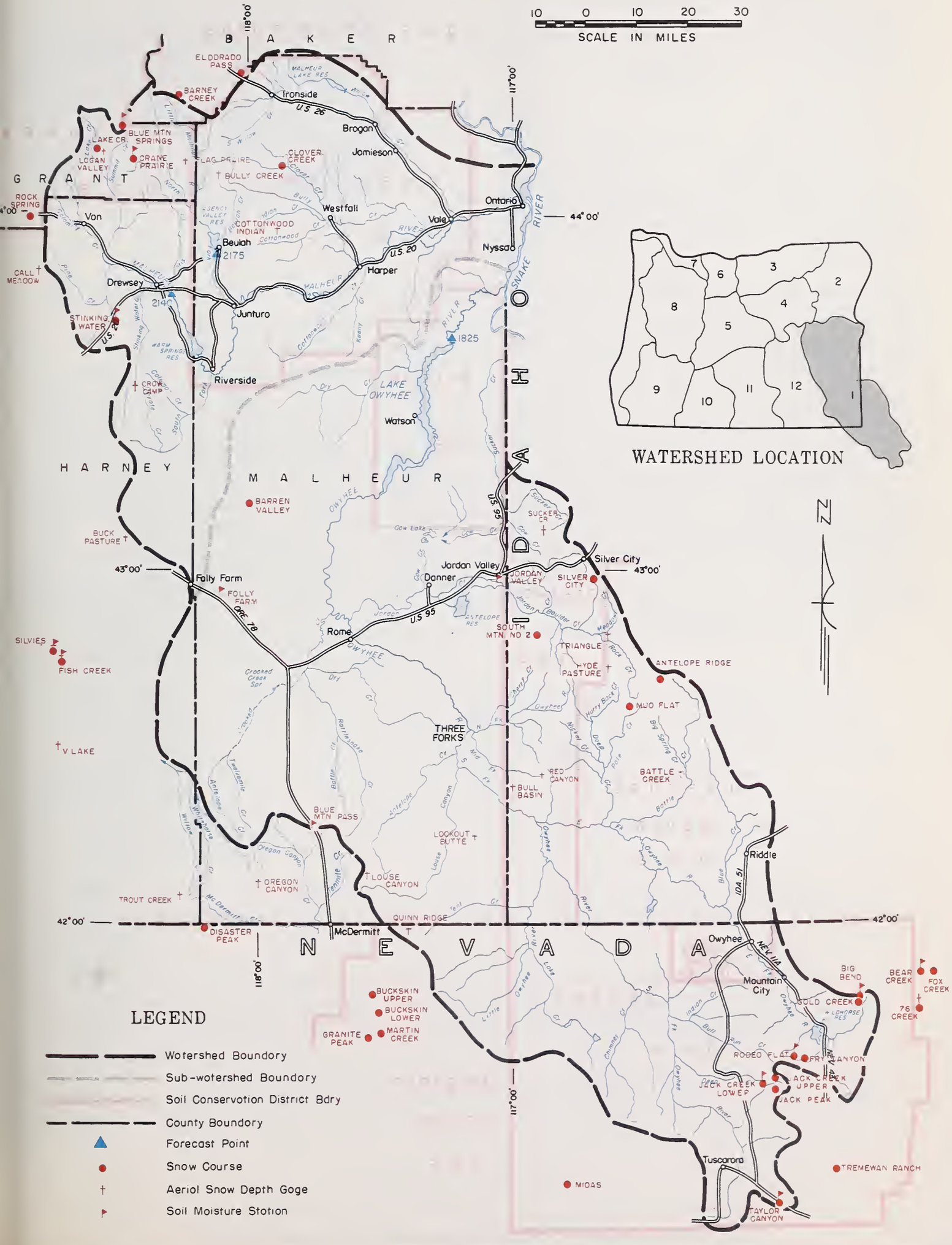
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bear Creek (Nev.)	7800	72	8.4	3-27-62	2.9	1.7	6.4
Big Bend (Nev.)	6700	48	9.6	3-27-62	7.8	7.9	9.2[i]
Blue Mountain Springs	5900	42	12.0	3-28-62	5.0	8.1	8.4[i]
Crane Prairie	5375	48	9.9	3-28-62	5.8	7.8	- -
Folly Farm	4450	30	6.9	2-23-62	4.4	4.8	5.3
Jack Creek, Lower (Nev.)	6800	48	4.9	3-29-62	4.8	4.8	4.1[i]
Jordan Valley	4250	48	9.8	2-23-62	5.2	5.9	5.9
Rodeo Flat (Nev.)	6800	42	6.0	3-27-62	6.0	6.0	6.0[i]
Stinking Water Summit	4800	48	11.7	2-23-62	10.2	11.2	10.3[i]
Taylor Canyon (Nev.)	6200	48	9.7	3-29-62	9.4	8.1	6.5[i]

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1943-57 AVERAGE
Antelope Ridge (Ida.)	5900	3/28	15	6.5	2.4	- -
Barney Creek	5950	3/22	37	11.0	6.5	8.6*
Battle Creek[e] (Ida.)	5700	3/29	6	2.3	3.1	- -
Bear Creek (Nev.)	7800	3/27	79	24.3	14.9	21.5*
Big Bend (Nev.)	6700	3/27	40	13.5	7.3	10.5
Blue Mountain Springs	5900	3/28	51	17.1	13.7	16.9
Buck Pasture[e]	5700	3/29	12	4.1	1.8	- -
Buckskin, Lower (Nev.)	6700	3/28	34	11.7	8.2	8.5*
Buckskin, Upper (Nev.)	7200	3/28	43	15.6	11.6	9.2*
Bull Basin[e] (Ida.)	5600	3/29	3	1.1	0.6	- -
Bully Creek[e]	5300	3/29	8	2.6	0.1	- -
Call Meadows[e]	5340	3/29	19	6.1	2.2	- -
Clover Creek	4100	*h*				
Cottonwood-Indian[e]	4320	3/29	0	0.0	T	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) USBR records of inflow. (h) Not surveyed. (i) Nearest current data. (j) Partly estimated. (*) 1943-57 Adjusted average.

OWYHEE, MALHEUR WATERSHEDS



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1943-57 AVERAGE
Crane Prairie	5375	3/28	30	9.0	7.4	9.8
Disaster Peak (Nev.)	6500	3/30	49	18.7	10.3	11.5*
Eldorado Pass	4600	3/26	3	1.1	0.0	- -
Fish Creek	7900	3/21	79	26.6	25.9	28.0*
Flag Prairie [e]	4750	3/29	10	3.2	0.3	- -
Fox Creek (Nev.)	6800	3/27	40	12.9	6.4	9.1*
Fry Canyon (Nev.)	6700	3/27	26	9.4	6.5	9.2
Gold Creek (Nev.)	6600	3/27	23	8.4	3.4	6.0
Granite Peak (Nev.)	7800	3/29	56	19.8	8.4	11.2*
Hyde Pasture [e] (Ida.)	5800	3/29	12	4.6	3.4	- -
Jack Creek, Lower (Nev.)	6800	3/29	15	5.5	3.7	2.5
Jack Creek, Upper (Nev.)	7250	3/30	40	14.7	9.3	10.9
Jack Peak (Nev.)	8420	3/30	100	36.4	- -	- -
Lake Creek	5120	3/28	33	9.8	8.7	11.2
Logan Valley	5100	3/28	27	7.5	5.0	- -
Lookout Butte [e]	5650	3/29	0	0.0	0.3	- -
Louse Canyon [e]	6440	3/29	12	4.2	3.3	- -
Martin Creek (Nev.)	6700	3/28	42	15.2	6.1	8.5*
Midas (Nev.)	7200	3/26	29	10.2	0.8	1.9*
Mud Flat (Ida.)	5500	3/28	17	4.8	4.6	- -
Oregon Canyon [e]	6950	3/29	32	11.2	6.6	- -
Quinn Ridge [e] (Nev.)	6300	3/29	11	3.8	0.3	- -
Red Canyon [e] (Ida.)	6500	3/29	24	9.1	5.9	- -
Rock Spring	5100	3/29	18	5.4	2.5	4.9
Rodeo Flat (Nev.)	6800	3/27	20	6.7	5.2	8.7
Silver City (Ida.)	6400	3/31	48	18.9	13.1	17.5*
Silvies	6900	3/22	54	18.4	12.6	14.4*
South Mountain No. 2 (Ida.)	6340	3/29	42	14.8	12.0	12.1*
Stinking Water	4800	3/28	9	3.6	0.0	0.7*
Succor Creek [e] (Ida.)	6100	3/29	22	8.4	- -	- -
Taylor Canyon (Nev.)	6200	3/29	12	4.8	T	3.5
Tremewan Ranch (Nev.)	5700	3/27	0	0.0	T	0.8
Triangle [e] (Ida.)	5150	3/29	0	0.0	1.6	- -
Trout Creek [e]	7800	3/29	36	12.6	6.6	- -
76 Creek [e] (Nev.)	7100	3/26	50	17.3	9.3	15.7*
"V" Lake [e]	6600	3/28	21	7.1	8.8	- -

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE · OREGON
AGRIC. EXPERIMENT STATION · OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1962 irrigation season begins in Baker, Union and Wallowa Counties with more water expected than in any season since the good water year of 1958. Although storage water supplies are about average, they are slightly below last year. However, expected streamflow can be counted on to make up the difference.

SNOW COVER - Water content of the mountain snowpack has increased more than usually expected in March and is now 2 percent greater than the average (1943-57). The snow is also 25 percent greater than last year at this date and should produce close to average streamflow in all watersheds except the main Grande Ronde and Hurricane Creek where flows should be about 10 percent less than average.

SOIL MOISTURE - Moisture in the top 3 or 4 feet of soils under the snowpack is still 31 percent below capacity and is 15 percent below that measured one year ago. These soils will be rapidly "primed" with early snowmelt water.

RESERVOIR STORAGE - Water stored in Wallowa Lake is 14,600 acre feet compared with 15,900 a.f. on April 1st last year and a 15 year average of 16,100 acre feet. Substantial inflow to the lake is expected.

Unity reservoir with 15,800 acre feet already in storage is a little behind last year when 18,800 acre feet were on hand. However, storage in this 25,000 acre feet capacity reservoir is already greater than the average storage of 13,600 acre feet and a good inflow is expected. There is no report on Thief Valley reservoir.

STREAMFLOW - The April-September flow of Burnt River is forecast at 104 percent of the 15 year average (1943-57) while the Powder River is expected to produce 102 percent average for the same period.

Flow of the Grande Ronde River at LaGrande is forecast at 90 percent average for the next 6 months while Catherine Creek is expected to produce 105 percent in the same period.

The Wallowa River tributaries are forecast to flow as follows: Hurricane Creek, 92 percent average; Bear Creek, 103 percent; Lostine River, 103 percent and East Fork Wallowa, 105 percent. Imnaha River is forecast at 112 percent of average for the April-September period.

The above forecasts assume normal conditions of temperature and rainfall during the runoff season.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Average
Big Creek	Average	Average
Clover Creek (nr. N. Powder)	Average	Average
Cove	Average	Average
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Average	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Average
Summerville	Average	Average
Sumpter Valley	Average	Average
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Unity	25.2	15.8	18.8	13.6
Wallowa Lake	37.5	14.6	15.9	16.1

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

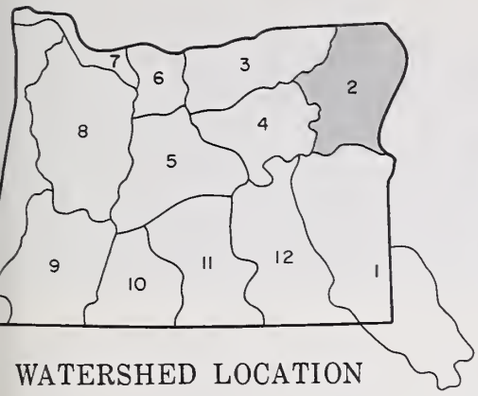
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
3305	Bear near Wallowa	76	April-Sept.	74	103
2730	Burnt near Hereford[d]	47	April-Sept.	45	104
		44	April-June	41	107
3200	Catherine near Union	77	April-Sept.	73	105
3190	Grande Ronde at LaGrande	182	April-Sept.	202	90
		180	April-July	199	90
3295	Hurricane near Joseph	45	April-Sept.	49	92
2920	Imnaha at Imnaha	353	April-Sept.	314	112
3300	Lostine near Lostine	137	April-Sept.	133	103
2755	Powder near Baker	67	April-Sept.	66	102
		65	April-July	65	100
3250	Wallowa, East Fork near Joseph[d]	12.7	April-Sept.	12.1	105
		10.3	April-July	9.7	106

AVAILABLE SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Summit	5100	36	10.4	3/23/62	1.2	5.3	3.8
Emigrant Springs	3925	48	15.0	3/31/62	14.0	14.6	- -[i]
Tollgate	5070	48	17.8	3/23/62	14.8	16.3	16.4[i]

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Water content partly estimated. (h) Not surveyed. (i) Nearest current data. (j) Partly estimated. (*) 1943-57 Adjusted averages.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES

WASHINGTON

IDAHO

OREGON

UMATILLA

UNION

WALLOWA

GRANT

BAKER

MALHEUR

46°00'

45°00'

117°00'

118°00'

TOLLGATE

MEACHAM

Elgin

Summerville

Wallowa

Enterprise

Imnaha

Joseph

La Grande

Starkey

Cove

Union

Medical Springs

North Powder

Haines

Baker

Keating

Halfway

Pine

Richland

Sumpter

Durkee

Hereford

Bridgeport

Unity

Huntington

LUCKY STRIKE

SCHOOLMARM

COUNTY LINE

BEAVER RES.

LITTLE ALPS

ANTHONY LAKE

EILERTSON MEADOWS

BOURNE

GOODRICH LAKE

GOLD CENTER

TIPTON

BLUE MTN. SUMMIT

COOLEY MTN.

BARNEY CREEK

ELOORAOO PASS

MOSS SPRING

BALD MTN.

STANDLEY

TAYLOR GREEN

SCHNEIDER MEADOWS

ANEROID LAKE NO. 2

ANEROID LAKE NO. 1

3190

3305

3300

3295

3250

3200

2920

2755

2730

SNAKE RIVER

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1943-57 AVERAGE
Aneroid Lake No. 1	7480	3/31	105	42.0	32.0	39.4
Aneroid Lake No. 2	7000	3/30	86	32.8	28.4	30.4
Anthony Lake	7125	3/28	91	29.4	27.2	30.5
Bald Mountain[e] (Ore.)	6700	3/29	93	34.4	29.9	- -
Barney Creek	5950	3/22	37	11.0	6.5	8.6*
Beaver Reservoir	5340	3/28	40	13.5	11.5	13.0
Blue Mountain Summit	5098	3/23	34	10.2	6.9	8.9
Bourne	5800	3/27	49	17.3	14.8	17.7
County Line	4800	3/30	19	6.4	2.0	8.6*
Dooley Mountain	5430	3/22	35	10.5	5.5	9.2
Eilertson Meadows	5400	3/28	34	10.2	9.7	12.2
Eldorado Pass	4600	3/26	3	1.1	0.0	- -
Gold Center	5340	3/27	45	15.2	11.1	13.3
Goodrich Lake	6775	*h*				
Little Alps	6200	3/28	56	18.3	13.0	- -
Lucky Strike	5050	3/29	47	14.1	11.8	14.3*
Meacham	4300	3/31	28	10.2	2.1	10.4
Moss Spring	5850	3/29	73	25.2	23.0	26.2
Schneider Meadows	5400	3/25	102	37.2	32.2	31.2
Schoolmarm	4775	3/30	15	5.2	0.1	6.4*
Standley[e]	7400	3/28	102	37.7	33.1	- -
Taylor Green	5740	3/26	53	17.6	13.0	18.0
Tipton	5100	3/23	37	11.8	9.0	11.0*
Tollgate	5070	3/23	73	25.6	26.9	30.5

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 irrigation season begins in the Umatilla-Walla Walla area with a close to adequate water supply outlook for most lands. McKay water users, however, have less stored water than last year.

SNOW COVER

Water content of the mountain snowpack is 7 percent below the 15 year average (1943-57) but it is 47 percent greater than last year on this date.

SOIL MOISTURE

Moisture in the top 3 to 4 feet of the soil immediately under the snowpack is now about 87 percent of capacity - just slightly more moist than a year ago today. This moisture is adequate to favor runoff from melting snow.

RESERVOIR STORAGE

Cold Springs reservoir is now full but McKay reservoir had only 35,000 acre feet in storage on April 1st compared with 53,700 a.f. last year. Inflow to McKay for the balance of the season is expected to be only 31,000 acre feet. Present storage of 35,000 a.f. plus expected inflow totals 66,000 acre feet for this year compared with 69,000 a.f. "in sight" in 1961 at this date.

STREAMFLOW

The forecast for inflow to McKay reservoir is 100 percent of average for this irrigation season. Flow of the Umatilla at Pendleton is forecast at 93 percent of the 15 year average (1943-57) and at Gibbon is 94 percent of the average.

Flow of the South Fork of the Walla Walla near Milton is forecast at 86 percent of average for the April-September period. The Hudson Bay and Pleasant View water users will have a "short" season unless good spring-summer rains are received.

Other small streams such as Birch, Butter, Willow, Rhea and Rock Creeks will have much better water supplies than last year.

All forecasts are made on the assumption that average conditions of temperature and rainfall will prevail in the runoff period.

Report prepared by
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209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Birch Creek	Average	Average
Butter Creek	Average	Average
Dry Creek	Average	Fair
Dugger Creek	Average	Fair
Johnson Creek	Average	Fair
McKay Creek	Average	Fair
Mill Creek	Average	Fair
Mud Creek	Average	Fair
Pine Creek	Average	Fair
Rhea Creek	Average	Average
Rock Creek	Average	Average
Umatilla River (Cold Springs Res.)	Average	Average
Umatilla River, Main	Average	Average
Umatilla River (McKay Res.)	Average	Fair
Walla Walla River, Little	Average	Fair
Walla Walla River, Main	Average	Fair
Walla Walla River, N. Fork	Average	Fair
Walla Walla River, S. Fork	Average	Fair
Willow Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cold Springs	50.0	50.0	50.0	47.5
McKay	73.8	35.0	53.7	56.8

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
0225	McKay near Pilot Rock	31	April-Sept.	31	100
		31	April-July	31	100
0200	Umatilla near Gibbon	90	April-Sept.	96	94
0210	Umatilla at Pendleton	173	April-Sept.	187	93
		170	April-July	182	93
0100	Walla Walla, South Fork near Milton	65	April-Sept.	76	86
		55	April-July	62	89

AVAILABLE SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Athena-Weston	1700	48	11.8	3/23/62	9.9	6.6	6.9[i]
Battle Mountain Summit	4340	48	8.0	2/28/62	6.0	7.3	4.7[i]
Emigrant Springs	3925	48	15.0	3/31/62	14.0	14.6	- -
Tollgate	5070	48	17.8	3/23/62	14.8	16.3	16.4[i]

SNOW

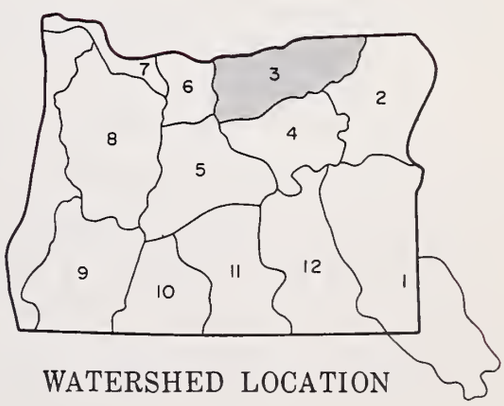
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1943-57 AVERAGE
Arbuckle Mountain	5400	3/21	41	15.1	7.8	12.1
Battle Mountain Summit	4340	3/22	14	4.0	0.0	- -
Emigrant Springs	3925	3/31	10	3.6	0.6	6.5
Lucky Strike	5050	3/29	47	14.1	11.8	14.3*
Meacham	4300	3/31	28	10.2	2.1	10.4
Tollgate	5070	3/23	73	25.6	26.9	30.5

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Nearest current data. (h) Partly estimated.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station



WATERSHED LOCATION

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 irrigation season in the Upper John Day area opens with average water supplies expected for all lands. March storms brought better than average amounts of snow, improving the slightly pessimistic outlook of last month.

SNOW COVER

Water content of the mountain snowpack is 11 percent greater than the 15 year average (1943-57) accumulation on April 1st and 48 percent greater than last year on this date.

Not since 1952 has the snowpack been as favorable as this year in the Beech Creek-Fox-Long Creek area.

SOIL MOISTURE

Moisture in the top 3 or 4 feet of the soil profile immediately under the snowpack has improved to 58 percent of capacity but is still drier than one year ago. Early snowmelt water will recharge these soils as spring runoff gets under way.

STREAMFLOW

Flow of the John Day River at Service Creek* has been only half normal all winter (October 1 to April 1) and is, in part, a reflection of the dry soil-mantle.

Forecasts of streamflow have all been significantly increased since March 1.

Flow of the John Day at Prairie City is forecast at 57,000 acre feet or 106 percent of the 15 year average (1943-57) for the April-September period. The Middle Fork at Ritter is expected to flow 109 percent of average in the same 6 month period. Similarly, the flow of Strawberry Creek is estimated to be 104 percent of average.

Flows of smaller streams such as Indian, Pine, Beech, Long Creek and others should be better than average - probably the best since 1958.

The above forecasts assume average conditions of temperature and precipitation during the runoff season.

*Preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Average	Average
Beech Cr.-Fox-Long Crs.	Average	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Average	Average
Cherry Creek	Average	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Average	Average
John Day River, Mid. Fork	Average	Average
John Day River, N. Fork	Average	Average
John Day River, S. Fork	Average	Average
Monument-Kimberly	Average	Average
Strawberry Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
0385	John Day at Prairie City	57	April-Sept.	54	106
		51	April-July	49	104
0440	John Day, Middle Fork at Ritter	147	April-Sept.	135	109
		143	April-July	131	109
0375	Strawberry near Prairie City	9.5	April-Sept.	9.1	104

AVAILABLE SOIL MOISTURE

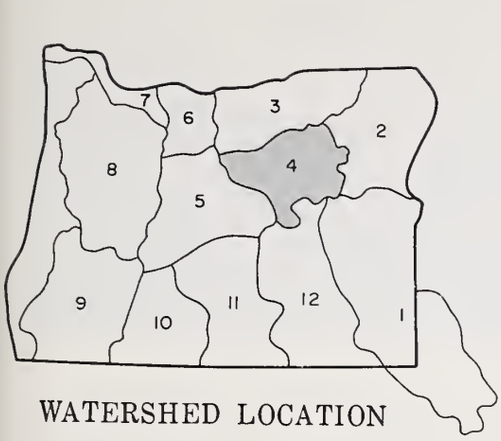
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	8.0	2/28/62	6.0	7.3	4.7 [i]
Blue Mountain Springs	5900	42	12.0	3/23/62	1.2	5.3	3.8
Blue Mountain Summit	5100	36	10.4	3/28/62	5.0	8.1	8.4 [i]
Marks Creek	4540	36	8.3	3/27/62	7.6	7.8	7.6
Snow Mountain	6300	48	10.4	3/20/62	8.7	- -	- -
Starr Ridge	5150	36	6.1	3/28/62	4.9	5.6	5.8 [i]

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1943-57 AVERAGE
Anthony Lake	7125	3/28	91	29.4	27.2	30.5
Arbuckle Mountain	5400	3/21	41	15.1	7.8	12.1
Battle Mountain Summit	4340	3/22	14	4.0	0.0	- -
Beech Creek Summit	4800	3/29	20	7.6	0.0	5.2
Blue Mountain Spring	5900	3/28	51	17.1	13.7	16.9
Blue Mountain Summit	5098	3/23	34	10.2	6.9	8.9
Derr	5670	3/28	38	11.6	9.5	10.8
East Fork Canyon [e]	5700	3/29	36	12.2	- -	- -
Gold Center	5340	3/27	45	15.2	11.1	13.3
Indian Creek Butte [e]	6550	3/29	75	25.5	22.7	- -
Izee Summit	5293	3/29	32	10.2	6.1	8.6
Lucky Strike	5050	3/29	47	14.1	11.8	14.3*
Marks Creek	4540	3/27	20	6.4	0.1	2.9
Ochoco Meadows	5200	3/30	47	16.3	7.2	11.0
Olive Lake	6000	3/28	68	23.7	17.7	22.3
Schoolmarm	4775	3/30	15	5.2	0.1	6.4*
Snow Mountain	6300	3/20	53	17.1	12.9	14.8*
Starr Ridge	5150	3/28	18	6.0	2.6	5.9
Tipton	5100	3/23	37	11.8	9.0	11.0*
Williams Ranch	4500	3/29	0	0.0	0.0	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not surveyed. (h) Nearest current data. (*) 1943-57 Adjusted average.

UPPER JOHN DAY WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage

WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1962 water supply outlook for the Deschutes-Crooked watersheds has improved during March and is now near average. Water supply forecasts have been raised due to above normal March increases to the snowpack on most of the watershed.

SNOW COVER - Water content of the snowpack on the Deschutes watershed is now 99 percent of the 1943-57 average and about 30 percent more than last year on April 1.

Crooked River watersheds now have 130 percent of the average snow cover and 73 percent more than last year at this time.

SOIL MOISTURE - Snowmelt water and rain have started to prime soils on these watersheds and electronic soil moisture stacks on Crooked River watershed indicates the top 3 to 4 feet is now 87 percent of capacity.

RESERVOIR STORAGE - Storage in reservoirs on the Deschutes is now slightly better than last year at this time and 18 percent better than the 1943-57 average for April 1. Wickiup has 189,200 acre feet, Crane Prairie 38,900 acre feet and Crescent Lake has 46,300 acre feet.

Ochoco reservoir is 27 percent better than last year on April 1 although still only 63 percent of average. It now holds 21,700 acre feet. Some Prineville reservoir water has been spilled and the reservoir now holds 88,400 acre feet.

STREAMFLOW - Streamflow forecasts have raised slightly and now range from 90 to 115 percent of average.

The forecast on the main Deschutes at Benham Falls is 91 percent or 550,000 acre feet for the April-September period. The Little Deschutes near Lapine is expected to flow 102,000 or 90 percent of average for this same period.

Squaw and Tumalo forecasts are 102 and 100 percent of average for 56,000 and 55,000 acre feet respectively.

Crooked River near Post forecast indicates a 148,000 acre feet for 115 percent of average flow for the coming irrigation season. The inflow to Ochoco reservoir for the April-July period is expected to be 110 percent of the 1943-57 average or 37,000 acre feet.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Average
Plainview-McCallister	Average	Average
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Average	Average
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Crane Prairie	55.3	38.9	41.2	45.2
Crescent Lake	117.2	46.3	44.5	47.0
Ochoco	47.5	21.7	20.8	34.3
Prineville	153.0	88.4	65.9	- -
Wickiup	182.0	189.2	181.6	141.3

Note: The U. S. Bureau of Reclamation indicates that dead storage in the amount of 5360 acre feet may be included in the current storage figure for Crescent Lake.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

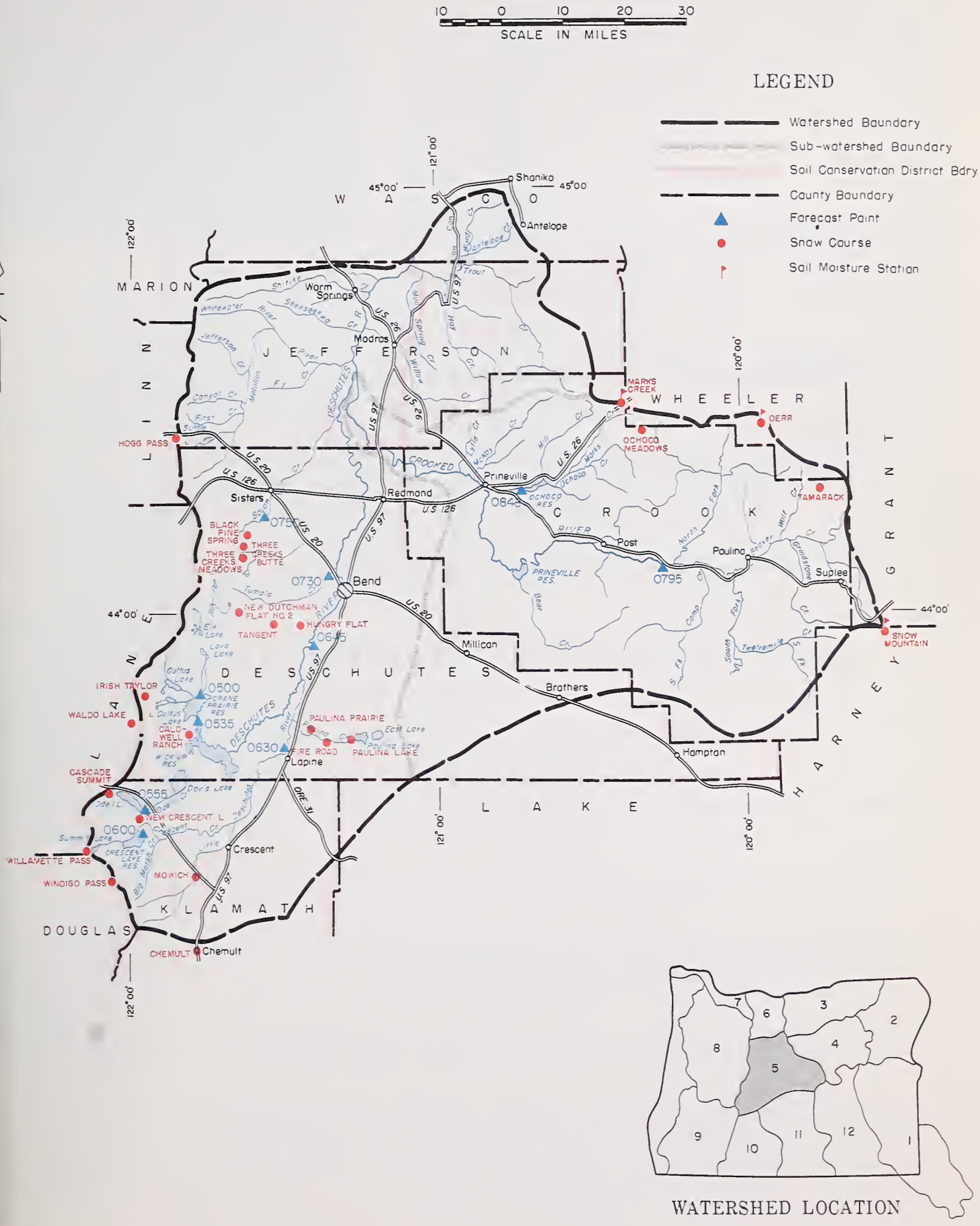
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	131	April-Sept.	143	92
0600	Crescent at Crescent Lake[d]	28	April-Sept.	31	90
		22	April-July	25	88
0795	Crooked near Post	148	April-Sept.	129	115
		146	April-July	127	115
0645	Deschutes at Benham Falls[d]	550	April-Sept.	602	91
		370	April-July	404	92
0500	Deschutes below Snow Creek	69	April-Sept.	74	93
0630	Deschutes, Little near Lapine[d]	102	April-Sept.	113	90
		90	April-July	100	90
0848	Ochoco Reservoir net Inflow	37	April-July	34	110
0555	Odell near Crescent	32	April-Sept.	34	94
0750	Squaw near Sisters	56	April-Sept.	55	102
0730	Tumalo near Bend[d]	55	April-Sept.	55	100

AVAILABLE SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Marks Creek	4540	36	8.3	3/27/62	7.6	7.8	7.6
Snow Mountain	6300	48	10.4	3/20/62	8.7	- -	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Partly estimated. (*) 1943-57 Adjusted average.

UPPER DESCHUTES, CROOKED WATERSHEDS



WATERSHED LOCATION

Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1943-57 AVERAGE
Black Pine Spring	4600	3/29	12	3.8	T	5.9*
Caldwell Ranch	4400	3/23	32	11.3	2.7	11.0
Cascade Summit	4880	3/30	87	35.6	24.6	36.7
Chemult	4760	3/27	29	10.3	7.2	10.8*
Derr	5670	3/28	38	11.6	9.5	10.8
Fire Road	5050	3/22	32	10.0	4.5	- -
Hogg Pass	4755	3/28	129	48.0	38.9	50.6
Hungry Flat	4400	3/28	T	T	0.0	6.1*
Irish-Taylor	5500	3/23	123	45.8	33.9	43.0*
Marks Creek	4540	3/27	20	6.4	0.1	2.9
Mowich	4700	3/27	11	3.4	0.0	- -
New Crescent Lake	4800	3/26	46	15.6	11.2	18.4*
New Dutchman Flat No. 2	6400	3/28	143	58.0	53.8	57.5*
Ochoco Meadows	5200	3/30	47	16.3	7.2	11.0
Paulina Lake	6330	3/22	70	22.9	22.8	- -
Paulina Prairie	4285	3/22	0	0.0	0.0	- -
Snow Mountain	6300	3/20	53	17.1	12.9	14.8*
Tamarack	4800	3/27	15	4.6	- -	- -
Tangent	5400	3/28	77	27.6	25.8	23.3*
Three Creeks Butte	5200	3/29	43	16.6	3.9	- -
Three Creeks Meadows	5600	3/29	76	28.7	18.3	23.3
Waldo Lake	5500	3/23	98	34.6	23.3	35.5
Willamette Pass	5600	3/26	123	45.2	38.2	46.2*
Windigo Pass	5800	3/27	132	48.3	40.6	48.5*

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 water supply outlook for the Hood River - Wasco County area has improved slightly and is now fair to average. The snowpack received greater than average March increases and watershed soils are well primed.

SNOW COVER

Water content of the snow as measured just prior to April 1st shows above average increases over most of the watershed. The snowpack is still 11 percent below the April 1 average but is now 30 percent better than last year at this time.

SOIL MOISTURE

Watershed soils are well primed and will aid runoff when the major spring thaw begins on higher watersheds.

RESERVOIR STORAGE

Clear Lake reservoir is reported to have 4,900 acre feet in storage compared with 6,300 acre feet on April 1st a year ago.

STREAMFLOW

Flow of Hood River* during March was 84 percent of the 1943-57 average. This stream has flowed 83 percent of average since October 1st.

Streamflow forecasts for the Hood and White Rivers have raised slightly over those issued one month ago.

White River is now expected to flow 160,000 acre feet or 90 percent of the 1943-57 average for the April-September period.

Hood River, West Fork forecast is 157,000 acre feet or 90 percent and Hood River near Hood River is expected to flow 321,000 acre feet or 88 percent for this same period.

The above forecasts assume normal temperatures and precipitation during the forecast period.

Flows of Rock, Gate, Threemile, Badger, Mosier, Mill, Fivemile, Eightmile and Fifteenmile Creeks are expected to produce flows better than the last three seasons, but a little below the 1943-57 average. These streams should have near average early season flows, tapering off to fair in the late season.

*Preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch	Average	Fair
Badger Creek	Average	Fair
Dee Irrigation Dist.	Average	Fair
East Fork Irrig. Dist.	Average	Fair
Farmers Irrig. Dist.	Average	Fair
Hood River Irrig. Dist.	Average	Fair
Juniper Flat Irrig. Dist.	Average	Fair
Middle Fork Irrig. Dist.	Average	Fair
Mile Creeks	Average	Fair
Mill Creek	Average	Fair
Mount Hood Irrig. Dist.	Average	Fair
Rock-Gate-Threemile Crs.	Average	Fair
Tygh Creek	Average	Fair
White River	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Clear Lake	- -	4.9	6.3	- -

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
1210	Hood near Hood River[d]	321	April-Sept.	365	88
		274	April-July	311	88
1185	Hood, West Fork near Dee	157	April-Sept.	174	90
		135	April-July	151	89
1015	White below Tygh Valley	160	April-Sept.	178	90
		145	April-July	161	90

SNOW

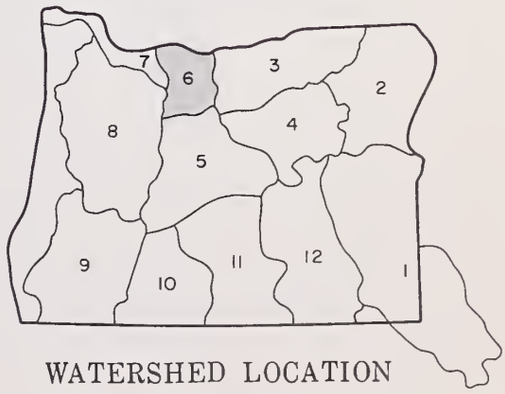
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1943-57 AVERAGE
Brooks Meadows	4300	3/26	42	14.8	6.1	15.0
Clear Lake	3500	3/27	24	7.6	4.5	16.1
Clear Lake Experimental	3500	3/27	46	15.5	8.8	- -
Cooper Spur	3490	c				
Greenpoint Reservoir	3400	3/24	49	18.6	5.8	17.7*
Knebal Springs	3850	3/26	26	9.9	2.6	- -
Parkdale	1770	c				
Phlox Point	5600	3/26	169	64.4	68.3	70.7
Red Hill	4400	4/1	106	45.4	37.2	54.3*
Still Creek	3700	3/27	64	24.8	19.6	30.1
Tilly Jane	6000	3/25	133	50.5	45.1	50.0*
Ulrich Ranch Junction	3350	3/26	16	5.4	0.0	- -
Upper Valley	2530	c				

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Partly estimated. (*) 1943-57 Adjusted average.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course



WATERSHED LOCATION

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK

The water supply outlook for spring and summer flow of the Columbia River near The Dalles has increased slightly as a result of good snowfall during March. The river is forecast to flow 101.0 million acre feet, which is 95 percent of the 15 year normal (1943-57) for the April-September period.

SNOW COVER

Snow courses, measured near April 1 in the United States and Canada indicate good snowfall throughout the month of March. The northern portion of the Columbia Basin in Canada has a snowpack near normal, and the remainder of the basin in Washington, Oregon, Montana, Western Wyoming and Idaho is variable but also close to average. The maximum snowpack is down and in the southern portion of the basin has already started to melt.

SOIL MOISTURE

Soil moisture conditions in the northern portion of Columbia Basin are poorer than they have been for many years. Base flow figures which usually reflect soil moisture status also indicate dry conditions on most northern tributaries. Base flow on the Kootenai River, however, is close to normal.

The number of soil moisture measurements made by means of electrodes in the soil beneath the snow has been increased significantly but records are short. However, experience indicates that soil moisture conditions in general are much drier than last year for most tributaries in the Columbia Basin and drier than normal.

STREAMFLOW

Flow of the Columbia River near The Dalles* has been below normal and steadily declining since October 1st.

Month	Percent of Normal Discharge (1943-57)
October	91 adjusted for storage
November	80 " " "
December	73 " " "
January	82 " " "
February	98 " " "
March	83 " " "

*Preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

Report prepared by
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
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M.W. NELSON - P.O. BOX 1247, BOISE, IDAHO

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
1057	Columbia at The Dalles	101,000	April-Sept.	106,100	95
		68,400	April-June	72,000	95

HISTORICAL DATA (Columbia River at The Dalles)

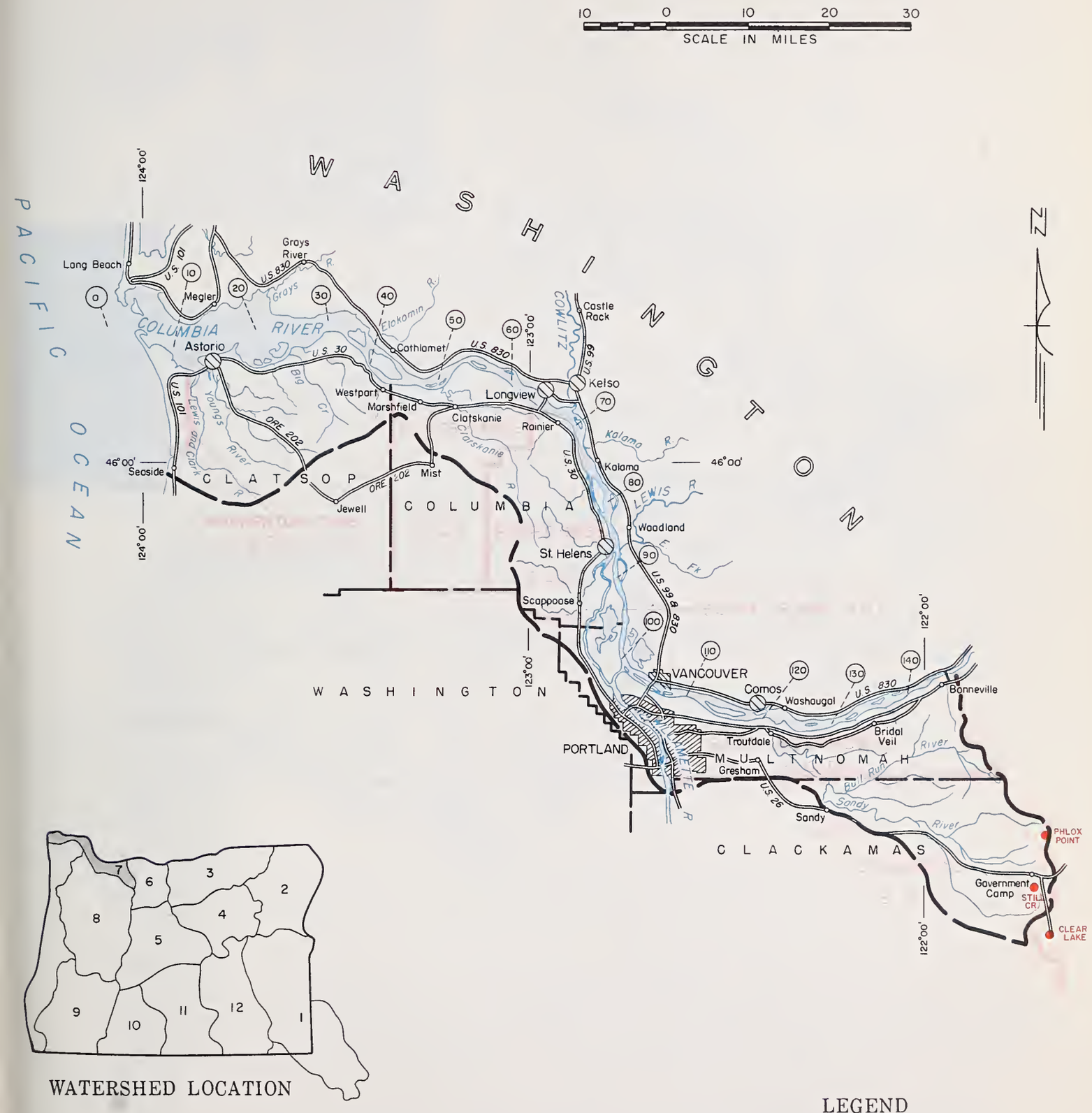
YEAR	STREAMFLOW[c] (1,000 A.F.) APR.— SEPT.	APR.— JUNE	MAY—JUNE	PEAK[e] (1,000 c.f.s)	DATE
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1943-57 Avg.	106,100	72,000	58,100	616	
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)[f]

VANCOUVER[g] GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	940	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	890	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	840	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	790	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	750	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	700	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	660	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	630	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	590	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	560	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20	530	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	510	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	480	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	450	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	430	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Observed flow corrected for storage in F.D.R., Kootenai, Pend Oreille, Flathead, Hungry Horse, Lake Chelan, Coeur d'Alene and Grand Coulee Equalizer. (d) Not scheduled. (e) Observed peak. (f) Based on Corps of Engineers automatic water stage recorder data. (g) Vancouver Weather Bureau gage zero is 1.82' above M.S.L.. All other readings are in feet above M.S.L.

LOWER COLUMBIA WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE · OREGON
AGRIC. EXPERIMENT STATION · OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 water supply outlook for most of the Willamette Valley has improved during March and is now near average as a result of good increases to the snowpack.

SNOW COVER

Water content of the snowpack on Willamette watersheds is still 13 percent below average for April 1 although about one-third better than last year at this time. Snow courses on the Clackamas are still the lowest on the watershed and are only 47 to 82 percent of average.

SOIL MOISTURE

Watershed soils are fairly well primed and should be in good condition to aid in spring runoff.

RESERVOIR STORAGE

The multi-purpose reservoirs on the Willamette River system have continued to fill according to a pre-arranged flood control plan administered by the Corps of Engineers.

STREAMFLOW

Streamflow during March on the Middle Fork of the Willamette was 88 percent of average and has been only 74 percent of average for the October-March period.*

Streamflow forecasts have been raised 5 - 11 percent on some Willamette tributaries as a result of good increases to the snowpack in March. Forecasts now vary from 82 percent on the Clackamas at Big Bottom to 101 percent on the Willamette Middle Fork for the April-September period. The Willamette at Salem is expected to flow 5,276,000 acre feet or 97 percent of average for this same period.

Smaller streams in the valley such as the Molalla, Calapooya and Pudding are expected to have near average streamflow for the coming season.

*Preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

Report prepared by
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U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
209 S.W. FIFTH AVENUE · PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Average	Fair
Clackamas	Average	Fair
McKenzie	Average	Average
Molalla	Average	Average
Santiam, North	Average	Average
Santiam, South	Average	Average
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cottage Grove	30.8*	16.5	15.8	19.2
Detroit	299.9*	162.8	195.2	147.7
Dorena	70.5*	44.1	35.7	36.8
Fern Ridge	94.2*	78.5	72.4	63.5
Hills Creek Res.	249.0*	129.3	- -	- -
Lookout Point	337.2*	117.6	201.0	- -

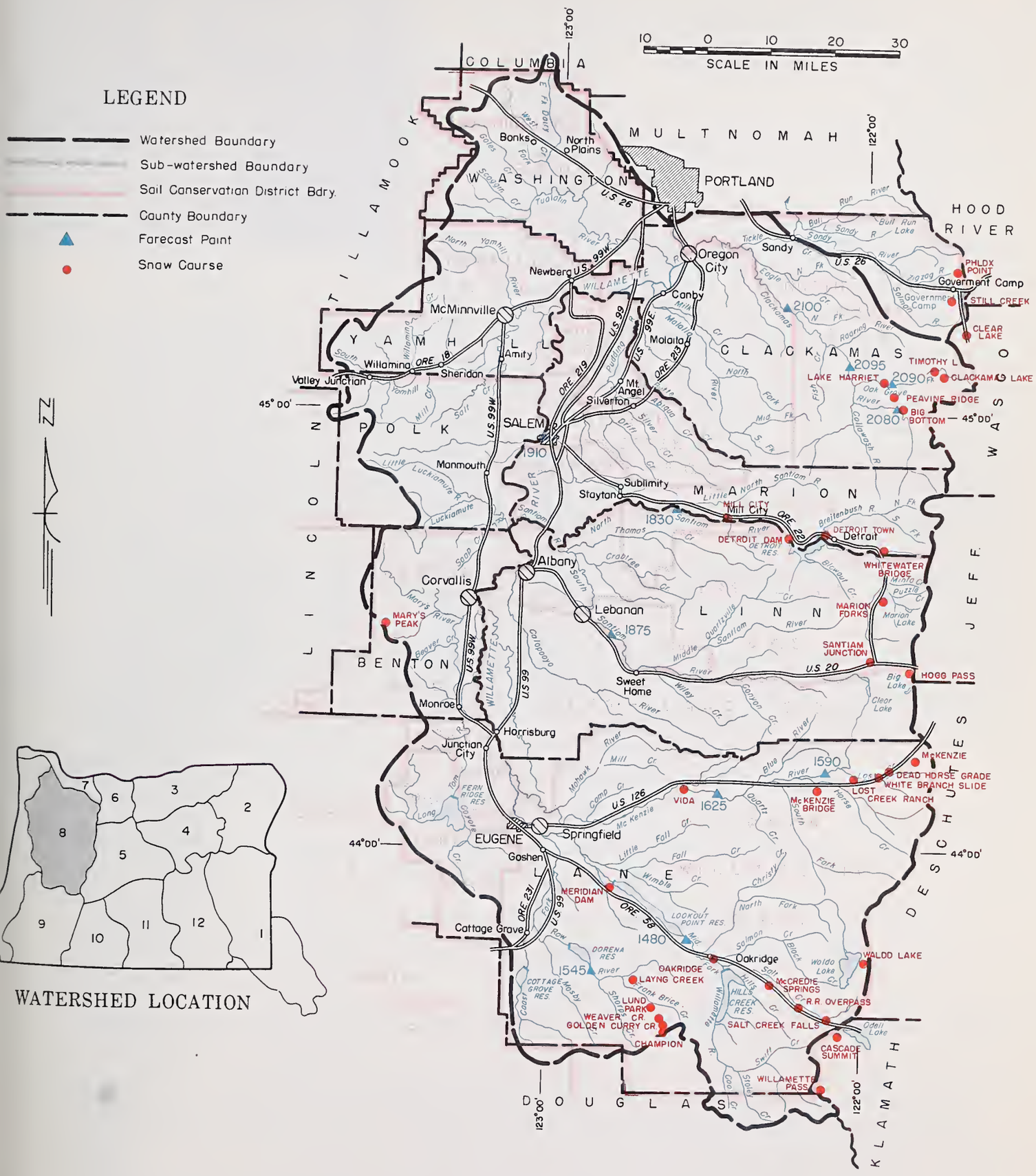
*Multiple purpose reservoir-- space reserved primarily for flood runoff.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
2080	Clackamas at Big Bottom	151	April-Sept.	184	82
		121	April-July	150	81
2100	Clackamas at Estacada	750	April-Sept.	879	85
		681	April-July	763	89
2095	Clackamas above Three Lynx	565	April-Sept.	674	84
		476	April-July	578	82
1590	McKenzie at McKenzie Bridge	637	April-Sept.	640	99
		489	April-July	488	100
1625	McKenzie near Vida	1346	April-Sept.	1362	99
		1113	April-July	1120	99
2090	Oak Grove Fork above Power Intake	173	April-Sept.	198	87
		134	April-July	156	86
1545	Row near Dorena	102	April-Sept.	114	89
		97	April-July	109	89
1830	Santiam, North at Mehama[d]	905	April-Sept.	968	93
		808	April-July	866	93
1875	Santiam, South at Waterloo	616	April-Sept.	652	94
		583	April-July	616	95
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	918	April-Sept.	909	101
		815	April-July	804	101
1910	Willamette at Salem[d]	5276	April-Sept.	5461	97
		4719	April-July	4942	95

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (*) 1943-57 Adjusted average.

WILLAMETTE WATERSHEDS



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1943-57 AVERAGE
Big Bottom	2118	3/30	0	0.0	0.0	9.2*
Cascade Summit	4880	3/30	87	35.6	24.6	36.7
Champion	4500	3/30	77	31.2	24.8	33.8
Clackamas Lake	3400	3/27	31	11.7	8.1	17.0*
Clear Lake	3500	3/27	24	7.6	4.5	16.1
Clear Lake Experimental	3500	3/27	46	15.5	8.8	- -
Dead Horse Grade	3800	3/27	58	23.0	11.8	24.1*
Detroit Town	1610	3/28	0	0.0	0.0	T*
Detroit Dam	1580	3/28	0	0.0	0.0	0.0*
Golden Curry Creek	3136	3/30	13	4.8	5.2	6.9*
Hogg Pass	4755	3/28	129	48.0	38.9	50.6
Lake Harriet	2045	3/30	0	0.0	0.0	0.2*
Layng Creek	1200	3/30	0	0.0	0.0	0.0*
Lost Creek Ranch	1956	3/27	T	T	0.0	1.5*
Lund Park	1740	3/30	0	0.0	0.0	0.0*
Marion Forks	2730	3/28	35	14.6	7.5	16.7
Marys Peak	3620	3/31	29	13.3	12.9	15.9*
McCredie Springs	2120	3/30	0	0.0	0.0	0.0*
McKenzie	4800	3/27	131	52.4	40.6	52.2*
McKenzie Bridge	1372	3/27	0	0.0	0.0	0.0*
Meridian Dam	750	3/30	0	0.0	0.0	0.0*
Mill City	826	3/28	0	0.0	0.0	0.0*
Oakridge	1310	3/30	0	0.0	0.0	0.0*
Peavine Ridge	3500	3/30	47	18.0	13.0	23.8
Phlox Point	5600	3/26	169	64.4	68.3	70.7
Railroad Overpass	2750	3/30	0	0.0	0.0	3.0*
Salt Creek Falls	4000	3/30	53	20.1	8.7	20.9*
Santiam Junction	3990	3/28	67	27.4	16.0	29.4
Still Creek	3700	3/27	64	24.8	19.6	30.1
Timothy Lake	3295	3/30	41	15.6	11.2	- -
Vida	800	3/27	0	0.0	0.0	0.0*
Waldo Lake	5500	3/23	98	34.6	23.3	35.5
Weaver Creek	2440	3/30	0	0.0	0.0	2.7*
White Branch Slide	2800	3/27	14	6.1	2.6	6.6*
Whitewater Bridge	2175	3/28	3	1.1	0.0	5.7*
Willamette Pass	5600	3/26	123	45.2	38.2	46.2*

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1962 water supply outlook for the Rogue-Umpqua basin has improved over the slightly dim outlook of one month earlier. Above average March increases to the snowpack has resulted in near average water supply forecasts for all streams in the Rogue basin.

SNOW COVER - Water content of the snowpack is now average for the basin as a whole and about one-fifth better than last year at this time. Snow courses in the Umpqua did not receive the good increases in snow water and still remain only near or below average.

SOIL MOISTURE - Most watershed soils have been well primed by snowmelt and winter rains and should not require a substantial amount of moisture to bring them to capacity as the spring melt begins.

RESERVOIR STORAGE - Fourmile and Fish Lakes now hold a total of 9,000 acre feet compared with 8,200 a.f. one year ago. Howard Prairie and Emigrant now hold 56,200 a.f. compared with 45,100 a.f. last year at this time. Hyatt Prairie has 8,300 a.f. of stored water. Last year it held only 4,000 a.f. on April 1st.

STREAMFLOW - Streamflow forecasts have been raised as a result of above average increases to the snowpack during March on most of the watershed.

Little Butte, North Fork at Fish Lake, is expected to flow 17,000 acre feet for the April-September period, or 101 percent of average.

Little Butte, South Fork near Lake Creek forecast has been raised to 46,000 acre feet (110 percent average) for the April-July period and the flow is expected to drop to 100 c.f.s. by June 14.

Fourmile Lake inflow forecast is now 7,800 acre feet for the April-September period or 105 percent of average.

Rogue River forecasts are now near average with the Rogue at Raygold expected to flow 1,025,000 acre feet for 102 percent of the 1943-57 April-September average. Canal rotation should not be necessary this year for the Grants Pass Irrigation District.

The Applegate and Illinois forecasts are now 108 and 105 percent of average respectively for the next 6 months. The North Umpqua is expected to flow 167,000 a.f. or 90 percent for the April-September period.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Average	Average
Applegate River, Big	Average	Average
Applegate River, Little	Average	Average
Ashland Creek	Average	Average
Butte Creek, Little	Average	Average
Butte Creek, Big	Average	Average
Cow Creek	Average	Fair
Deer Creek	Average	Fair
Elk Creek	Average	Fair
Emigrant Cr. (above Res.)	Average	Average
Evans Creek	Average	Average
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Average	Fair
Illinois River, East Fork	Average	Average
Illinois River, West Fork	Average	Average
Jump-off-Joe Creek	Average	Average
Neil Creek	Average	Average
Red Blanket Creek	Average	Average
Rogue River	Average	Average
Sucker Creek	Average	Average
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Average	Average
Wagner Creek	Average	Average
Williams Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

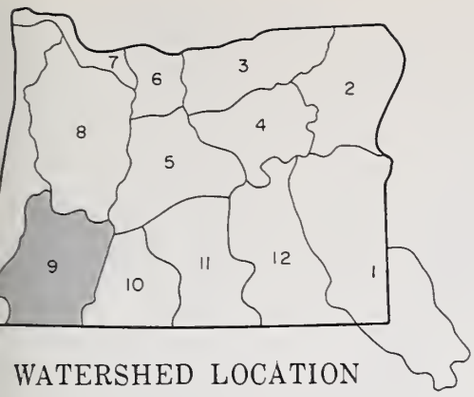
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Emigrant Gap	39.0	33.7	25.9	7.4
Fish Lake	7.8	4.5	4.1	5.5
Fourmile Lake	16.1	4.5	4.1	9.2
Howard Prairie	60.0	22.5	19.2	- -
Hyatt Prairie	16.1	8.3	4.0	8.2

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
3620	Applegate near Copper	141	April-Sept.	131	108
3145	Clearwater above Trap Creek[d]	65	April-Sept.	73	89
5045	Fourmile Lake net Inflow[d]	7.8	April-Sept.	7.4	105
5140	Hyatt Reservoir net Inflow[d]	6.2	April-Sept.	6.2	100
3770	Illinois River at Kerby[d]	206	April-Sept.	196	105
		200	April-July	190	105
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr.[d]	17.0	April-Sept.	16.9	101
3415	Little Butte, S. Fk. nr. Lake Creek	46	April-July	42	110
	Note: Minimum flow will drop to 100 c.f.s. by June 14				
3280	Rogue above Prospect	357	April-Sept.	351	102
		300	April-July	293	102
3320	Rogue, South Fork near Prospect[d]	83	April-Sept.	83	100
		71	April-July	71	101
3350	Rogue below South Fork	760	April-Sept.	749	101
		624	April-July	608	103
3590	Rogue at Raygold near Central Point	1025	April-Sept.	1004	102
		867	April-July	842	103
3615	Rogue at Grants Pass	980	April-Sept.	974	101
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	167	April-Sept.	186	90

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) Not Surveyed. (h) Construction. (i) 7 of 18 sampling points. (j) Partly estimated. (*) 1943-57 Adjusted average.

ROGUE, UMPQUA WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1943-57 AVERAGE
Althouse	4530	3/28	27	9.5	7.3	6.5
Annie Spring	6018	3/30	124	48.2	50.1	49.2
Beaver Dam Creek	5100	3/30	46	16.9	10.2	- -
Big Red Mountain	6500	3/27	85	31.1	27.1	30.2
Billie Creek Divide	5300	3/30	68	27.2	21.0	26.3
Champion	4500	3/30	77	31.2	24.8	33.8
Cold Springs Camp	6100	3/31	105	41.0	38.8	- -
Deadwood Junction	4600	3/30	34	12.1	5.2	- -
Diamond-Crater Summit	5800	3/26	121	41.9	36.2	- -
Diamond Lake	5315	3/26	74	27.6	22.1	26.7
Eden Valley Summit	2390	g				
Fish Lake	4865	3/29	43	18.1	9.8	13.9*
Fourmile Lake	6000	3/29	72	28.4	23.4	32.8*
Grayback Peak	6000	3/29	72	27.9	19.7	27.4
Hazel View (Cal.)	2500	g				
Hobart Lake	5010	g				
Howard Prairie	4500	3/30	36	12.2	4.9	- -
Hyatt Prairie Reservoir	4900	3/27	36	11.8	5.2	9.5*
Little Red Mountain	6500	3/27	68	26.8	23.7	24.1
North Umpqua	4215	3/28	40	15.7	12.0	15.7
Page Mountain	4045	3/28	17	5.6	3.7	- -
Park Headquarters	6450	3/30	157	56.9	61.2	61.4*
Red Butte #1	4560	3/27	43	14.4	17.4	- -
Red Butte #2	4000	3/27	24	10.0	9.5	- -
Red Butte #3	3500	3/27	17	6.8	8.0	- -
Red Butte #4	3000	3/27	0	0.0	0.5	- -
Red Butte #5	2500	3/27	0	0.0	0.0	- -
Red Butte #6	2000	3/27	0	0.0	0.0	- -
Rye Spring Spur	5000	3/29	41	17.6	8.0	- -
Seven Lakes #1	6800	3/28	159	66.6	56.2	62.6*
Seven Lakes #2	6200	3/27	131	49.8	44.1	46.1
Silver Burn	3720	3/27	30	12.6	9.7	13.0
Siskiyou Summit	4630	3/30	7	2.6	0.0	3.9*
South Fork Canal	3500	3/27	0	0.0	0.0	1.2
Trap Creek	3800	3/28	26	8.3	6.8	14.0*
Wagner Butte	6900	g				
Whaleback	5140	3/30	95	38.1	35.1	39.3*
Windigo Pass	5800	3/27	132	48.3	40.6	48.5*

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE · OREGON
AGRIC. EXPERIMENT STATION · OREGON STATE ENGINEER

GENERAL OUTLOOK - The 1962 water supply outlook has continued to improve for Klamath Basin during March and now indicates adequate supplies for the coming irrigation season.

SNOW COVER - Water content of the snowpack over the whole basin is 109 percent of the 1943-57 average and 26 percent better than last year at this time. The east side of the basin has a much better than usual snowpack with some courses averaging near double the usual amounts of snow water for April 1st.

Snow courses on the west side of the basin are near average but apparently did not get the good storms the eastern part of the county experienced.

SOIL MOISTURE - Soil moisture has been improved slightly at lower elevations by some snowmelt water and rains during March. Watershed soils under the high snowpack still remain relatively dry and will soak up some snowmelt water.

RESERVOIR STORAGE - Stored water in Gerber and Clear Lake reservoirs has improved only a small amount and is still only 28 and 36 percent of average respectively. Gerber now holds 15,200 acre feet and Clear Lake has 94,000 acre feet.

Upper Klamath Lake has 481,200 acre feet and is 110 percent of the April 1 average.

STREAMFLOW - Streamflow forecasts have improved and now range from 111 to 138 percent of average for the basin.

Clear Lake and Gerber inflows are expected to be 138 percent of average or 65,000 and 33,000 acre feet respectively for the April-June period.

The inflow to Klamath Lake forecast is 111 percent of average or 700,000 acre feet for the April-September period.

Sprague River forecast is 340,000 acre feet or 115 percent of average for the April-September period and the Williamson is expected to flow 545,000 acre feet or 112 percent of the 1943-57 average for this same period.

All of the above forecasts are based on average precipitation and temperatures for the remainder of the season.

Report prepared by
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209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Average	Average
Upper Klamath Lake	Average	Average
Williamson River	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Clear Lake	440.2	94.0	121.7	259.0
Gerber	94.0	15.2	20.0	54.9
Upper Klamath Lake	584.0	481.2	506.5	437.2

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

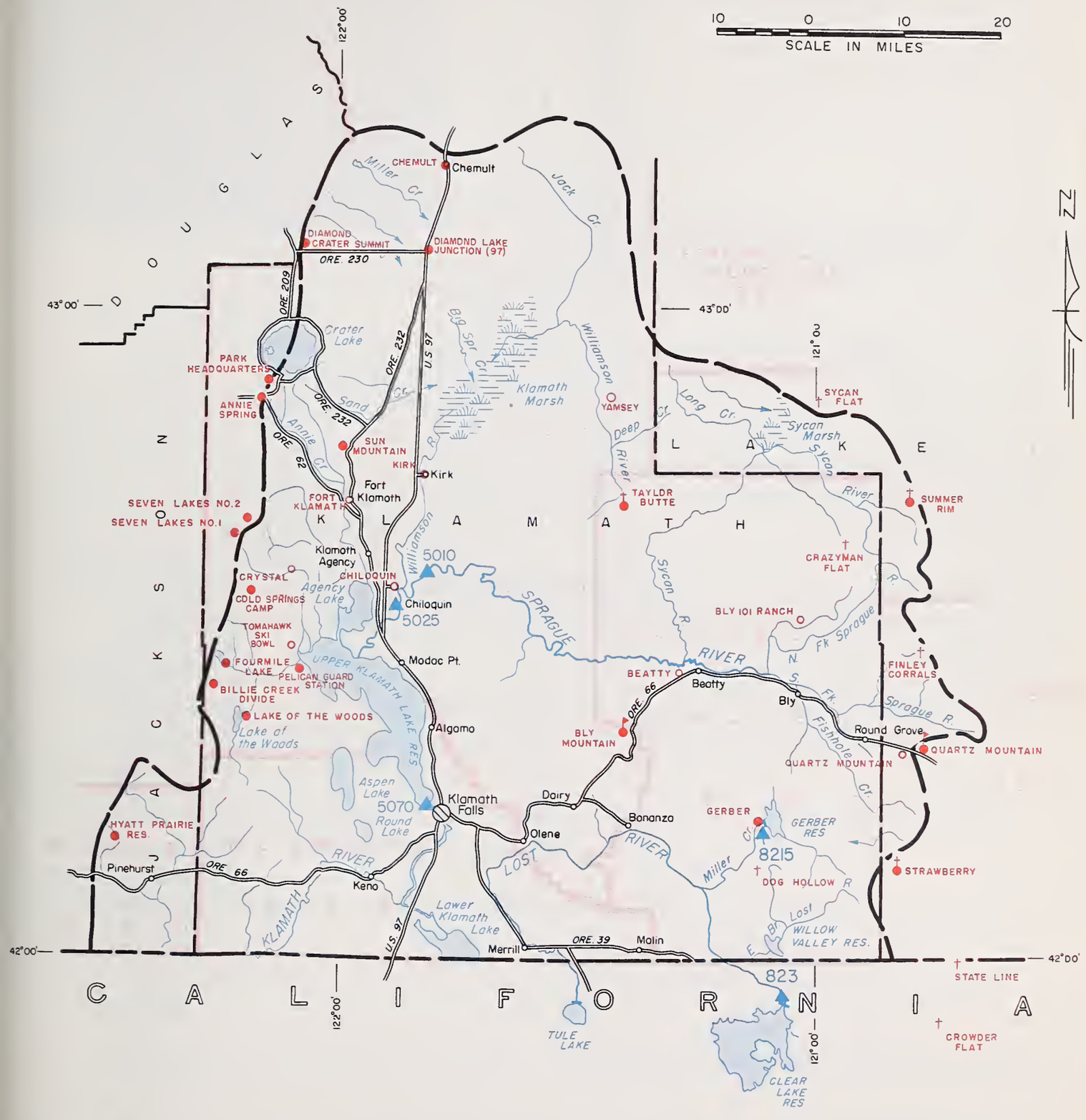
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
823	Clear Lake Reservoir Inflow [g]	65	April-June	47	138
8215	Gerber Reservoir Inflow [g]	33	April-June	24	138
5010	Sprague near Chiloquin	340	April-Sept.	296	115
5070	Upper Klamath Lake net Inflow [g]	700	April-Sept.	632	111
5025	Williamson below Sprague River	545	April-Sept.	486	112

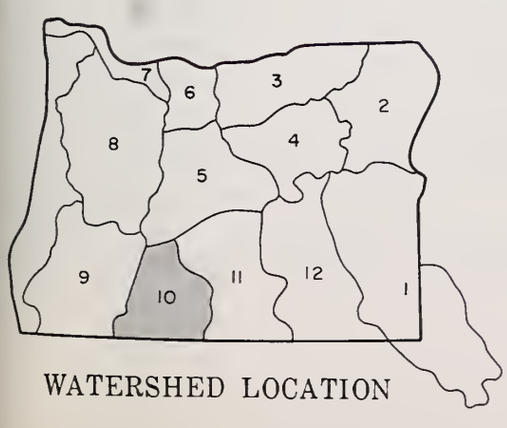
AVAILABLE SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bly Mountain	5090	42	7.4	2/27/62	2.2	- -	- -
Quartz Mountain	5320	48	10.7	3/16/62	1.2	- -	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (g) From COPCO or USBR records of inflow. (h) Flashboards increase capacity to 513.0 (i) Water content partly estimated. (*) 1943-57 Adjusted average.

KLAMATH WATERSHEDS





WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1943-57 AVERAGE
Annie Spring	6018	3/30	124	48.2	50.1	49.2
Beatty (PP&L)	4300	*f*				
Billie Creek Divide	5300	3/30	68	27.2	21.0	26.3
Bly Mountain	5090	3/30	27	10.6	2.6	- -
Bly 101 Ranch (PP&L)	4800	*f*				
Chemult	4760	3/27	29	10.3	7.2	10.8*
Chiloquin (PP&L)	4187	*f*				
Cold Springs Camp	6100	3/31	105	41.0	38.8	- -
Crazyman Flat [e]	6100	3/27	37	13.3	12.8	- -
Crowder Flat [e] (Cal.)	5200	3/27	8	2.9	0.0	0.2*
Crystal (PP&L)	4200	*f*				
Diamond-Crater Summit	5800	3/26	121	41.9	36.2	- -
Diamond Lake Junction (97)	4600	3/26	20	7.4	0.4	- -
Dog Hollow [e]	4900	3/27	0	0.0	0.0	- -
Finley Corrals [e]	6000	3/27	61	22.0	19.2	- -
Fort Klamath (PP&L)	4150	*f*				
Gerber	4850	3/29	T	T	0.0	- -
Hyatt Prairie Reservoir	4900	3/27	36	11.8	5.2	9.5*
Kirk (PP&L)	4533	*f*				
Lake of the Woods	4960	3/26	44	14.7	8.3	11.9
Park Headquarters	6450	3/30	157	56.9	61.2	61.4*
Pelican Guard Station	4150	3/31	0	0.0	0.0	- -
Quartz Mountain	5320	3/30	26	9.8	2.8	5.4
Quartz Mountain (PP&L)	5504	3/30	30	10.4	4.4	5.7*
Seven Lakes #1	6800	3/28	159	66.6	56.2	62.6*
Seven Lakes #2	6200	3/27	131	49.8	44.1	46.1
State Line [e] (Cal.)	5750	3/27	46	16.6	8.1	- -
Strawberry	5600	3/30	38	13.2	6.9	8.2*
Summer Rim	7200	3/26	61	22.1	19.1	19.7
Sun Mountain	5350	3/29	83	29.2	23.6	29.1
Sycan Flat [e]	5500	3/27	26	9.4	2.8	- -
Taylor Butte	5100	3/23	25	8.8	1.8	4.3*
Tomahawk Ski Bowl (PP&L)	4200	*f*				
Yamsey (PP&L)	4600	*f*				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE · OREGON
AGRIC. EXPERIMENT STATION · OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 water supply outlook for Lake County has continued to improve to "near average". Stored water supplies are very low but better than average streamflow forecasts are expected to offset this shortage.

SNOW COVER

Snow cover received above average increases during March. The water content of Lake County snow courses is now 155 percent of the 1943-57 average and almost double last year on April 1st.

SOIL MOISTURE

Watershed soil moisture has improved during March but is still very dry on the upper reaches of the watershed under the snowpack. Valley soils are fairly well primed.

RESERVOIR STORAGE

Cottonwood and Drews reservoirs now hold a combined storage of 12,700 acre feet which is only 25 percent of average and well below last year's storage of 19,300 acre feet.

Lakeview Water Users, Inc. should have enough water for this season's crops if they practice careful water management.

STREAMFLOW

Streamflow forecasts in Lake County have been raised again and are all slightly above average.

The inflow to Drews reservoir is expected to be 40,000 acre feet for the April-July period or 118 percent of average.

The Chewaucan forecast for the April-September period is 108,000 acre feet or 119 percent.

Honey Creek is expected to flow 18,500 acre feet for 109 percent for this same period and Deep Creek, heading at a higher elevation, is forecast at 129 percent of average or 98,000 acre feet during April-September.

Twentymile Creek is estimated at 105 percent of average or 21,000 acre feet for this same period.

Smaller streams in the area are expected to flow near average during the season.

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209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Average	Average
Crooked Creek	Average	Average
Deep Creek	Average	Average
Dry Creek	Average	Average
East Side Goose Lake	Average	Average
Guano Lake	Average	Average
Honey Creek	Average	Average
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mtn.)	Average	Average
Silver-Buck Creeks	Average	Average
Summer Lake	Average	Average
Thomas Creek	Average	Average
Twentymile Creek	Average	Average
Warner Lakes	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
Cottonwood	4.1	0.9	2.0	1.5
Drew	63.0	11.8	17.3	48.7

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.)

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[b]
NO.	NAME				
3840	Chewaucan near Paisley	97	April-June	82	118
		108	April-Sept.	91	119
3715	Deep above Adel	92	April-June	71	130
		98	April-Sept.	76	129
3385	Drew Reservoir net Inflow	40	April-July	34	118
3785	Honey near Plush	17.7	April-June	16.3	109
		18.5	April-Sept.	16.9	109
3660	Twentymile near Adel	21	April-June	20	105

AVAILABLE SOIL MOISTURE

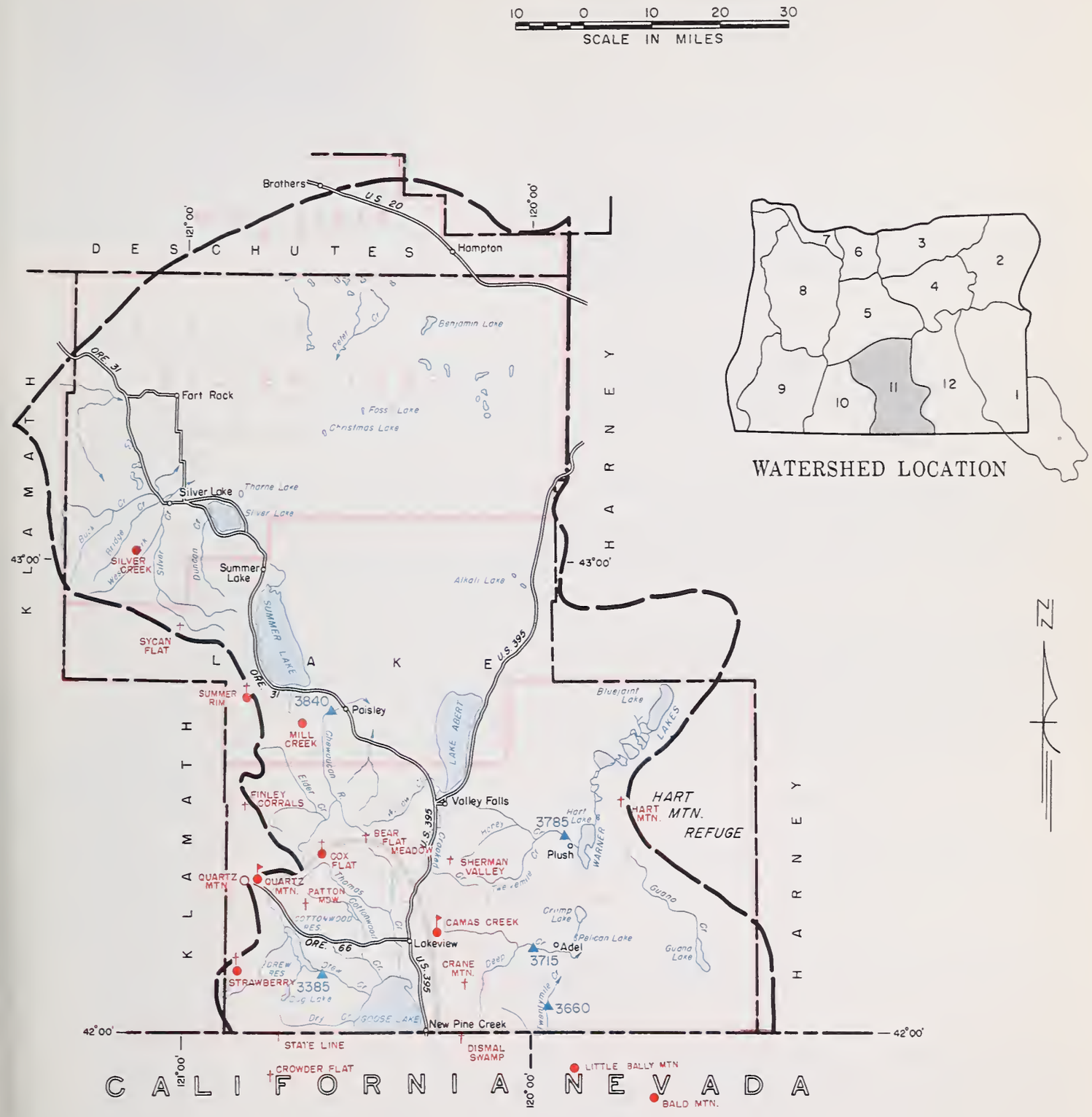
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	AVAILABLE CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5720	42	6.0	3/28/62	1.6	- -	- -
Quartz Mountain	5320	48	10.7	3/16/62	1.2	- -	- -

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1943-57 AVERAGE
Bald Mountain (Nev.)	6720	3/30	23	8.0	1.4	3.1
Bear Flat Meadow[e]	5900	3/27	46	16.6	12.0	- -
Camas Creek	5720	3/28	44	16.7	9.4	11.8
Cox Flat[e]	5750	3/27	38	13.7	1.2	- -
Crane Mountain[e]	6020	3/27	24	8.6	3.0	- -
Crowder Flat[e] (Cal.)	5200	3/27	8	2.9	0.0	0.2*
Dismal Swamp[e] (Cal.)	7000	3/28	69	24.8	16.2	- -
Finley Corrals[e]	6000	3/27	61	22.0	19.2	- -
Hart Mountain[e]	6350	3/28	11	4.0	0.6	- -
Little Bally Mountain[e] (Nev.)	6600	3/28	12	4.3	1.4	- -
Mill Creek	6200	3/27	37	13.4	7.6	9.1
Quartz Mountain (PP&L)	5504	3/30	30	10.4	4.4	5.7*
Quartz Mountain	5320	3/30	26	9.8	2.8	5.4
Sherman Valley[e]	6600	3/28	52	18.7	11.4	- -
Silver Creek	4900	3/27	13	4.1	0.0	1.6
State Line[e] (Cal.)	5750	3/27	46	16.6	8.1	- -
Strawberry	5600	3/30	38	13.2	6.9	8.2*
Summer Rim	7200	3/26	61	22.1	19.1	19.7
Sycan Flat[e]	5500	3/27	26	9.4	2.8	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage; water content estimated. (f) Report delayed. (*) 1943-57 Adjusted average.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of
APRIL 1, 1962

U. S. D. A. SOIL CONSERVATION SERVICE - OREGON
AGRIC. EXPERIMENT STATION - OREGON STATE ENGINEER

GENERAL OUTLOOK

The 1962 irrigation season begins in Harney County with slightly greater than average water supplies expected for all agricultural purposes. March storms brought greater than average increases in the snowpack.

SNOW COVER

Water content of the mountain snowpack in Harney Basin is 14 percent greater than the 15 year average (1943-57) and 50 percent greater than a year ago at this date. There appears to be heavier than usual drifting of the snow this winter - a factor which appears to favor runoff conditions.

SOIL MOISTURE

Moisture in the top 3 or 4 feet of soils under the snowpack at moderate and higher elevations is still only 58 percent of capacity compared with 83 percent of capacity one year ago. These relatively dry soils will absorb some of the early snowmelt water. Valley soils are generally well wet as a result of mid-winter snowmelt.

STREAMFLOW

Forecasts have been raised slightly since the outlook of February 1st.

Flow of the Silvies River for the April-September period is forecast at 115 percent of the 15 year average (1943-57). Silver Creek near Riley should flow 115 percent of average for the April-July period.

In southern Harney County the Blitzen River is forecast at 115 percent of average for the next 6 months while Trout Creek near Denio is expected to produce 148 percent average for that period.

Other small streams such as Rock Creek, Skull and Home Creeks in Catlow Valley and Whitehorse Creek in the Trout Creek Mountains are expected to produce average water supplies.

Nearer Burns, the small streams of Poison, Mill, Coffee-Pot, Cow and Rattlesnake Creeks should produce more water than any year since 1958.

The above forecasts assume that average conditions of temperature and rainfall will prevail in the runoff season.

Report prepared by
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U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
209 S.W. FIFTH AVENUE - PORTLAND 4, OREGON

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Average
Cow Creek	Average	Average
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Average	Average
Rattlesnake Creek	Average	Average
Rock Creek (Hart Mtn.)	Average	Average
Silver Creek	Average	Average
Silvies River	Average	Average
Soldier-Prather Creeks	Average	Average
Trout Creek	Average	Average
Whitehorse Creek	Average	Average

AVAILABLE SOIL MOISTURE

STATION NAME	ELEVATION	PROFILE (Inches) DEPTH	AVAILABLE CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Springs	5900	42	12.0	3/28/62	5.0	8.1	8.4 [i]
Fish Creek	7600	48	9.5	3/22/62	3.5	- -	- -
Folly Farm	4450	36	8.3	2/23/62	4.4	4.8	5.3
Silvies	6900	48	10.3	3/22/62	6.8	- -	- -
Snow Mountain	6300	48	10.4	3/20/62	8.7	- -	- -
Starr Ridge	5150	36	6.1	3/28/62	4.9	5.6	5.8 [i]
Stinking Water	4800	48	11.7	2/23/62	10.2	11.2	10.3 [i]
Willow-Bald	5000	24	4.3	3/20/62	1.7	4.3 [i]	2.2 [i]

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

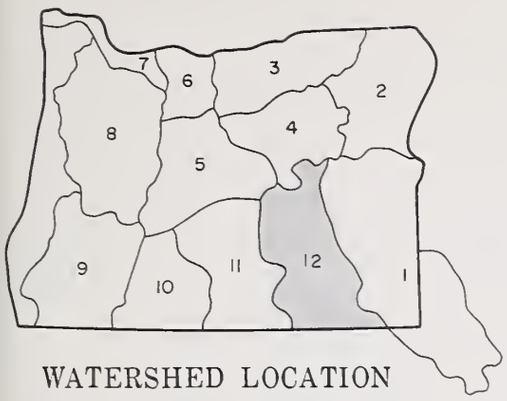
FORECAST POINT NO.	NAME	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE [b]
3960	Donner und Blitzen near Frenchglen	77	April-Sept.	67	115
		65	April-June	55	118
4030	Silver near Riley	30	April-July	26	115
3935	Silvies near Burns	123	April-Sept.	107	115
		120	April-June	103	116
4065	Trout near Denio	13.6	April-Sept.	9.2	148
		11.8	April-June	8.1	146

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	1943-57 AVERAGE
Blue Mountain Spring	5900	3/28	51	17.1	13.7	16.9
Buck Pasture [e]	5700	3/29	12	4.1	1.8	- -
Buckskin Lake [e]	5200	3/28	0	0.0	- -	- -
Call Meadows [e]	5340	3/29	19	6.1	2.2	- -
Delintment Lake	5600	3/20	34	9.5	7.4	8.8*
Denio Creek [e]	6000	3/28	0	0.0	0.0	- -
Disaster Peak (Nev.)	6500	3/30	49	18.7	10.3	11.5*
Emigrant Butte	5000	3/20	20	6.3	0.0	- -
Fish Creek	7900	3/21	79	26.6	25.9	28.0*
Foster Flat [e]	5020	3/27	0	0.0	- -	- -
Hart Mountain [e]	6350	3/28	11	4.0	0.6	- -
Idlewild Camp	5200	3/29	22	6.2	3.9	5.0
Izee Summit	5293	3/29	32	10.2	6.1	8.6
Lake Creek	5120	3/28	33	9.8	8.7	11.2
Oregon Canyon [e]	6950	3/29	32	11.2	6.6	- -
Rock Spring	5100	3/29	18	5.4	2.5	4.9
Silvies	6900	3/22	54	18.4	12.6	14.4*
Snow Mountain	6300	3/20	53	17.1	12.9	14.8*
Starr Ridge	5150	3/28	18	6.0	2.6	5.9
Stinking Water	4800	3/28	9	3.6	0.0	0.7*
Trout Creek [e]	7800	3/29	36	12.6	6.6	- -
"V" Lake [e]	6600	3/28	21	7.1	8.8	- -

(a) Assuming normal meteorological conditions. (b) 1943-57, 15 year period. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Report delayed. (g) Not surveyed. (h) Partly estimated. (i) No Fall measurement. (j) Nearest current data. (*) 1943-57 Adjusted average.

HARNEY BASIN WATERSHEDS



WATERSHED LOCATION

10 0 10 20 30
SCALE IN MILES

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- † Aerial Snow Depth Gage
- ⚑ Soil Moisture Station

"The Conservation of Water begins with the Snow Survey"

OWYHEE, MALHEUR WATERSHEDS (1)

Owyhee River

Number	Name		Sec.	Twp.	Rge.	Elev.
[illegible]	Antelope Ridge	(Ida)	32	8S	1W	5900
[illegible]	Barren Valley		26	27S	35E	4200
[illegible]	Battle Creek	(Ida)	10	11S	1E	5700
[illegible]	Bear Creek	(Nev)	31	46N	55E	7800
[illegible]	Big Bend	(Nev)	30	45N	56E	6700
[illegible]	Blue Mtn Pass		4	38S	42E	5290
[illegible]	Buckskin, Lower	(Nev)	25	45N	39E	6700
[illegible]	Buckskin, Upper	(Nev)	11	45N	39E	7200
[illegible]	Bull Basin	(Ida)	29	12S	5W	5600
[illegible]	Disaster Peak	(Nev)	8	47N	34E	6500
[illegible]	Fish Creek		4	33S	33E	7900
[illegible]	Folly Farm Summit		8	30S	35E	4450
[illegible]	Fox Creek	(Nev)	33	46N	55E	6800
[illegible]	Fry Canyon	(Nev)	31	43N	54E	6700
[illegible]	Gold Creek	(Nev)	31	45N	56E	6600
[illegible]	Granite Peak	(Nev)	22	44N	39E	7800
[illegible]	Hyde Pasture	(Ida)	31	8S	2W	5800
[illegible]	Jack Creek, Lower	(Nev)	15	42N	53E	6800
[illegible]	Jack Creek, Upper	(Nev)	6	42N	53E	7250
[illegible]	Jack Peak	(Nev)	28	45N	53E	8420
[illegible]	Jordan Valley		9	30S	46E	4390
[illegible]	Lookout Butte		2	40S	47E	5650
[illegible]	Louse Canyon		27	40S	44E	6440
[illegible]	Martin Creek	(Nev)	18	44N	40E	6700
[illegible]	Midas	(Nev)	18	39N	46E	7200
[illegible]	Mud Flat	(Ida)	34	9S	2W	5500
[illegible]	Oregon Canyon		8	40S	40E	6950
17H6a	Quinn Ridge	(Nev)	9	47N	41E	6300
16G11a	Red Canyon	(Ida)	32	11S	4W	6500
15H6M	Rodeo Flat	(Nev)	36	43N	53E	6800
15H3A	76 Creek	(Nev)	6	44N	58E	7100
16F3	Silver City	(Ida)	6	5S	3W	6400
18G1MA	Silvies		35	32S	32½E	6900
16G1	South Mountain No. 2	(Ida)	35	7S	5W	6340
16F4a	Sucker Creek		Unsurveyed			
15H9M	Taylor Canyon	(Nev)	35	39N	53E	6200
15H8	Tremewan Ranch	(Nev)	9	39N	55E	5700
16G4MA	Triangle	(Ida)	25	7S	3W	5150
18G5a	Trout Creek		10	41S	38E	7800
18G7a	"V" Lake		31	35½S	32½E	6600

Malheur River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Barney Creek	16	14S	36E	5950
18E16M	Blue Mountain Spring	21	15S	35E	5900
18F6a	Buck Pasture	21	29S	35E	5700
18E21a	Bully Creek	10	17S	37E	5300
18F7a	Call Meadows	29	20S	33E	5340
17E2	Clover Creek	36	16S	39E	4100
17F2a	Cottonwood-Indian	10	19S	39E	4320
18E19M	Crane Prairie	24	16S	34E	5375
18F8a	Crow Camp	Unsurveyed			
18E20	Eldorado Pass	20	14S	38E	4600
18E26a	Flag Prairie	32	16S	36E	4750
18E18	Lake Creek	10	16S	33½E	5120
18E22a	Logan Valley	13	16S	33½E	5100
18F1	Rock Spring	23	18S	32E	5100
18F4M	Stinking Water	33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS (2)

Burnt River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Barney Creek	16	14S	36E	5950
18E13M	Blue Mountain Summit	6	12S	36E	5098
17E1M	Dooley Mountain	32	11S	40E	5430
18E20	Eldorado Pass	20	14S	38E	4600
18E8	Gold Center	21	9S	36E	5340
18E9	Tipton	34	10S	35½E	5100

Powder River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E1	Anthony Lake	18	7S	37E	7125
18E5	Bourne	33	8S	37E	5800
17E1M	Dooley Mountain	32	11S	40E	5430
18E3	Eilertson Meadows	18	8S	38E	5400
18E8	Gold Center	21	9S	36E	5340
18E6	Goodrich Lake	4	9S	38E	6775
18E23	Little Alps	10	7S	37E	6200
18D10	Summit Springs	9	6S	37E	6000
17D7	Taylor Green	3	6S	42E	5740

Pine Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
17D8	Schneider Meadows	35	6S	45E	5400

Grande Ronde River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2	Aneroid Lake No. 2	16	4S	45E	7000
18E1	Anthony Lake	18	7S	37E	7125
17D10a	Bald Mountain	14 & 15	4S	41E	6700
18D9	Beaver Reservoir	8	5S	37E	5340
18D8	County Line	28	4S	34E	4800
18D6	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
17D6M	Moss Spring	28	3S	41E	5850
18D7	Schoolmarm	28	4S	34E	4775
17D11a	Standley	28	2S	42E	7400
17D7	Taylor Green	3	6S	42E	5740
18D3M	Tollgate	32	4N	38E	5070

Imnaha River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2	Aneroid Lake No. 2	16	4S	45E	7000

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2	Arbuckle Mountain	33	4S	29E	5400
18D14m	Athena-Weston Summit	21	4N	35E	1700
18D12M	Battle Mountain Summit	29	3S	31E	4340
18D4M	Emigrant Springs	29	1N	35E	3925
18D6	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3M	Tollgate	32	4N	38E	5070
18D13	Walla Walla Diversion	22	6N	38E	2400

Walla Walla River

Number	Name	Sec.	Twp.	Rge.	Elev.
18D3M	Tollgate	32	4N	38E	5070

Willow Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2	Arbuckle Mountain	33	4S	29E	5400

UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E1	Anthony Lake	18	7S	37E	7125
19D2	Arbuckle Mountain	33	4S	29E	5400
18D12M	Battle Mountain Summit	29	3S	31E	4340
19E2	Beech Creek Summit	4	12S	30E	4800
18E16M	Blue Mountain Spring	21	15S	35E	5900
18E13M	Blue Mountain Summit	6	12S	36E	5098
19E3M	Derr	14	13S	23E	5670
18E11	Dixie Springs	28	11S	34E	6650
18E27a	East Fork Canyon	15	15S	32E	5700
18E8	Gold Center	21	9S	36E	5340
18E24a	Indian Cr. Butte	5	15S	33E	6550
19E9	Izee Summit	28	16S	29E	5293
18D6	Lucky Strike	28	3S	32E	5050
20E1M	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
18E7	Olive Lake	14	9S	33½E	6000
18D7	Schoolmarm	28	4S	34E	4775
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18E9	Tipton	34	10S	35½E	5100
18E25M	Williams Ranch	20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E11	Black Pine Spring	14	16S	9E	4600
21F8	Caldwell Ranch	30	21S	8E	4400
22F3	Cascade Summit	7	23S	6E	4880
21F7	Charlton Lake	23	21S	6E	5750
21F11	Chemult	21	27S	8E	4760
21F14	Fire Road	36	21S	11E	5050
21E6	Hogg Pass	24	13S	7½E	4755
21F4	Hungry Flat	30	18S	11E	4400
21F6	Irish-Taylor	25	20S	6E	5500
21F17	Mowich	29	25S	25E	4700
21F10	New Crescent Lake	11	24S	6E	4800
21F19	New Dutchman Flat #2	21	18S	9E	6400
21F13	Paulina Lake	34	21S	12E	6330
21F15	Paulina Prairie	28	21S	11E	4285
21F3	Tangent	28	18S	10E	5400
21E15	Three Creeks Butte	27	16S	9E	5200
21E13	Three Creek Meadows	3	17S	9E	5600
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600
22F15	Windigo Pass	20	25S	6E	5800

Crooked River

Number	Name	Sec.	Twp.	Rge.	Elev.
19E3M	Derr	14	13S	23E	5670
20E1M	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
19F1M	Snow Mountain	1	19S	26E	6300
19E4	Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS (6)

Hood River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D5	Brooks Meadows	2	2S	10E	4300
21D25	Cooper Spur	6	2S	10E	3490
21D1	Greenpoint Reservoir	28	2N	9E	3400
21D20	Knebal Springs	31	1S	11E	3850
21D23	Parkdale	6	1S	10E	1770
21D8	Phlox Point	6	3S	9E	5600
21D4	Red Hill	21	1S	9E	4400
21D9	Still Creek	25	3S	8½E	3700
21D7	Tilly Jane	15	2S	9E	6000
21D21	Ulrich Ranch Junction	28	1S	11E	3350
21D24	Upper Valley	20	1S	10E	2530

Mile Creeks - Mosier Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
21D6	Brooks Meadows	2	2S	10E	4300
21D20	Knebal Springs	31	1S	11E	3850
21D21	Ulrich Ranch Junction	28	1S	11E	3350

Lower Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D12	Clear Lake	29	4S	9E	3500
21E6	Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700

WILLAMETTE WATERSHEDS (8)

Clackamas River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D15	Big Bottom	25	6S	7E	2118
21D13	Clackamas Lake	35	5S	8½E	3400
21D12	Clear Lake	29	4S	9E	3500
21D16	Lake Harriet	4	6S	7E	2045
21D14	Peavine Ridge	14 & 15	6S	7E	3500
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700
21D17	Timothy Lake	26	5S	8E	3295

Santiam River

Number	Name	Sec.	Twp.	Rge.	Elev.
22E1	Detroit (town)	1	10S	5E	1610
22E2	Detroit Dam	7	10S	5E	1580
21E6	Hogg Pass	24	13S	7½E	4755
21E4	Marion Forks	28	11S	7E	2730
22E3	Mill City	29	9S	3E	826
21E5	Santiam Junction	14	13S	7E	3990
21E3	Whitewater Bridge	28	10S	7E	2175

McKenzie River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E8	Dead Horse Grade	13	16S	7E	3800
22E4	Lost Creek Ranch	24	16S	6E	1956
21E7	McKenzie	35	15S	7½E	4800
22E5	McKenzie Bridge	13	16S	5E	1372
22E6	Vida	28	16S	2E	800
21E9	White Branch Slide	15	16S	7E	2800

Middle Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F3	Cascade Summit	7	23S	6E	4880
22F6	McCredie Springs	26	21S	4E	2120
22F8	Meridian Dam	13	19S	1W	750
22F7	Oakridge	16	21S	3E	1310
22F5	Railroad Overpass	27	22S	5E	2750
22F4	Salt Creek Falls	33	22S	6E	4000
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600

Coast Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F10	Golden Curry Creek	1	23S	1E	3136
22F13	Layng Creek R. S.	31	21S	1E	1200
22F12	Lund Park	22	22S	1E	1740
22F11	Weaver Creek	35	22S	1E	2440

Mary's River

Number	Name	Sec.	Twp.	Rge.	Elev.
23E1	Mary's Peak	21	12S	7W	3620

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

Number	Name	Sec.	Twp.	Rge.	Elev.
23G4	Althouse	17	41S	7W	4530
22G6	Annie Spring	19	31S	6E	6018
22G28	Beaver Dam Creek	Unsurveyed			
22G21	Big Red Mountain	31	40S	1W	6500
22G13	Billie Creek Divide	30	36S	5E	5300
22G27	Deadwood Junction	Unsurveyed			
22F19	Diamond-Crater Summit	34	28S	6E	5800
22G14	Fish Lake	3	37S	4E	4865
22G12	Fourmile Lake	9	36S	5E	6000
23G3	Grayback Peak	9	40S	5W	6000
23H1	Hazel View (Cal)	9	48N	4E	2500
22G17	Hobart Lake	17	40S	3E	5010
22G26	Howard Prairie	32	38S	4E	4500
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G22	Little Red Mountain	25	40S	2W	6500
23G6	Oregon Caves	16	40S	6W	4000
23G5	Page Mountain	8	41S	7W	4045
22G5	Park Headquarters	8	31S	6E	6450
22G29	Rye Spring Spur	Unsurveyed			
22G10	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6200
22G2	Silver Burn	30	30S	4E	3720
22G20	Siskiyou Summit	17	40S	2E	4630
22G9	South Fork Canal	12	33S	3E	3500
22G18	Wagner Butte	1	40S	1W	6900
22G1	Whaleback	3	31S	2E	5140

Umpqua River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F18	Diamond Lake	29	27S	6E	5315
23G7	Eden Valley Summit	10	32S	10W	2390
22F16	North Umpqua	19	26S	6E	4215
22F23	Red Butte No. 1	36	27S	2W	4560
22F24	Red Butte No. 2	30	27S	1W	4000
22F25	Red Butte No. 3	Unsurveyed			
22F26	Red Butte No. 4	Unsurveyed			
22F27	Red Butte No. 5	Unsurveyed			
22F28	Red Butte No. 6	Unsurveyed			
22F17	Trap Creek	1	27S	4E	3800
22G1	Whaleback	3	31S	2E	5140
22F15	Windigo Pass	20	25S	6E	5800

KLAMATH WATERSHEDS (10)

Klamath River

Number	Name	Sec.	Twp.	Rge.	Elev.
22G6	Annie Spring	19	31S	6E	6018
22G13	Billie Creek Divide	30	36S	5E	5300
21G5	Bly Mountain	15 & 22	37S	11E	5090
21F11	Chemult	21	27S	8E	4760
22G24	Cold Springs Camp	12	35S	5E	6100
21G12a	Crazyman Flat	9	34S	15E	6100
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600
21G6a	Dog Hollow	1	40S	14E	4900
21G14a	Finley Corrals	11	36S	10E	6000
22G12	Fourmile Lake	9	36S	5E	6000
21G4	Gerber	12	39S	13E	4850
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G26	Howard Prairie	32	38S	4E	4500
22G15	Lake of the Woods	11	37S	5E	4960
22G5	Park Headquarters	8	31S	6E	6450
22G25	Pelican Guard Station	9	36S	6E	4150
20G6	Quartz Mountain	2	38S	16E	5320
22G10	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6200
20H1a	State Line (Cal)	21	48N	11E	5750
20G9A	Strawberry	4	40S	16E	5600
20G2A	Summer Rim	15	33S	16E	7200
21G2	Sun Mountain	22	32S	7½E	5350
20G13a	Sycan Flat	25	31S	14E	5500
21G3	Taylor Butte	16	33S	11E	5100

The California Oregon Power Company's Snow Stations

Number	Name	Sec.	Twp.	Rge.	Elev.
1	Beatty (COPCO)	22	36S	12E	4300
10	Bly 101 Ranch (COPCO)	22	35S	14E	4800
3	Chiloquin (COPCO)	34	34S	7E	4137
4	Crystal (COPCO)	26	34S	6E	4200
5	Fort Klamath (COPCO)	22	33S	7½E	4150
6	Kirk (COPCO)	1	33S	7E	4533
9	Quartz Mountain (COPCO)	33	37S	16E	5504
8	Tomahawk Ski Bowl (COPCO)	3	36S	6E	4200
12	Yamsey (COPCO)	20	31S	11E	4600

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G8M	Camas Creek	5	39S	21E	5720
20G11a	Cox Flat	16	37S	18E	5750
20G16a	Crane Mountain	13	40S	21E	6020
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
20H3a	Dismal Swamp (Cal)	31	48N	16E	7000
20G17a	Patton Meadow	28	39S	18E	6800
20G6	Quartz Mountain	2	38S	16E	5320
20H1a	State Line (Cal)	21	48N	11E	5750
20G9A	Strawberry	4	40S	16E	5600

Abert Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G11a	Cox Flat	16	37S	18E	5750
20G14a	Finley Corrals	11	36S	16E	6000
20G4	Mill Creek	1	34S	17E	6200
20G6	Quartz Mountain	2	38S	16E	5320
20G10a	Sherman Valley	15	37S	21E	6600

Summer Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G2A	Summer Rim	15	33S	16E	7200

Silver Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
21F12	Silver Creek	25 & 26	29S	13E	4900
20G13a	Sycan Flat	25	31S	14E	5500

Warner Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G8M	Camas Creek	5	39S	21E	5720
20G16a	Crane Mountain	13	40S	21E	6020
20H3a	Dismal Swamp (Cal)	31	48N	22E	7000
19G1a	Hart Mountain	1	36S	25E	6350
20G10a	Sherman Valley	15	37S	21E	6600

Guano Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
19H1	Bald Mountain (Nev)	17	45N	21E	6720
19G1a	Hart Mountain	1	36S	25E	6350
19H4a	Little Bally Mtn. (Nev)	8	45N	19E	6600

HARNEY BASIN WATERSHEDS (12)

Silvies River - Silver Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
18F7a	Call Meadows	29	20S	33E	5340
19F2	Delintment Lake	28	19S	26E	5600
19F3	Emigrant Butte	14	21S	27E	5000
18F3	Idlewild Camp	27	20S	31E	5200
19E9	Izee Summit	28	16S	29E	5293
18F1	Rock Spring	23	18S	32E	5100
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18F4M	Stinking Water	33	21S	34E	4800
19F4m	Willow-Bald	19	22S	29E	5000

Donner Und Blitzen River

Number	Name	Sec.	Twp.	Rge.	Elev.
18F6a	Buck Pasture	21	29S	35E	5700
18G2MA	Fish Creek	4	33S	33E	7900
19G1a	Hart Mountain	1	36S	25E	6350
18G1MA	Silvies	35	32S	32½E	6900
18G7a	"V" Lake	31	35½S	32½E	6600

Trout and Whitehorse Creeks

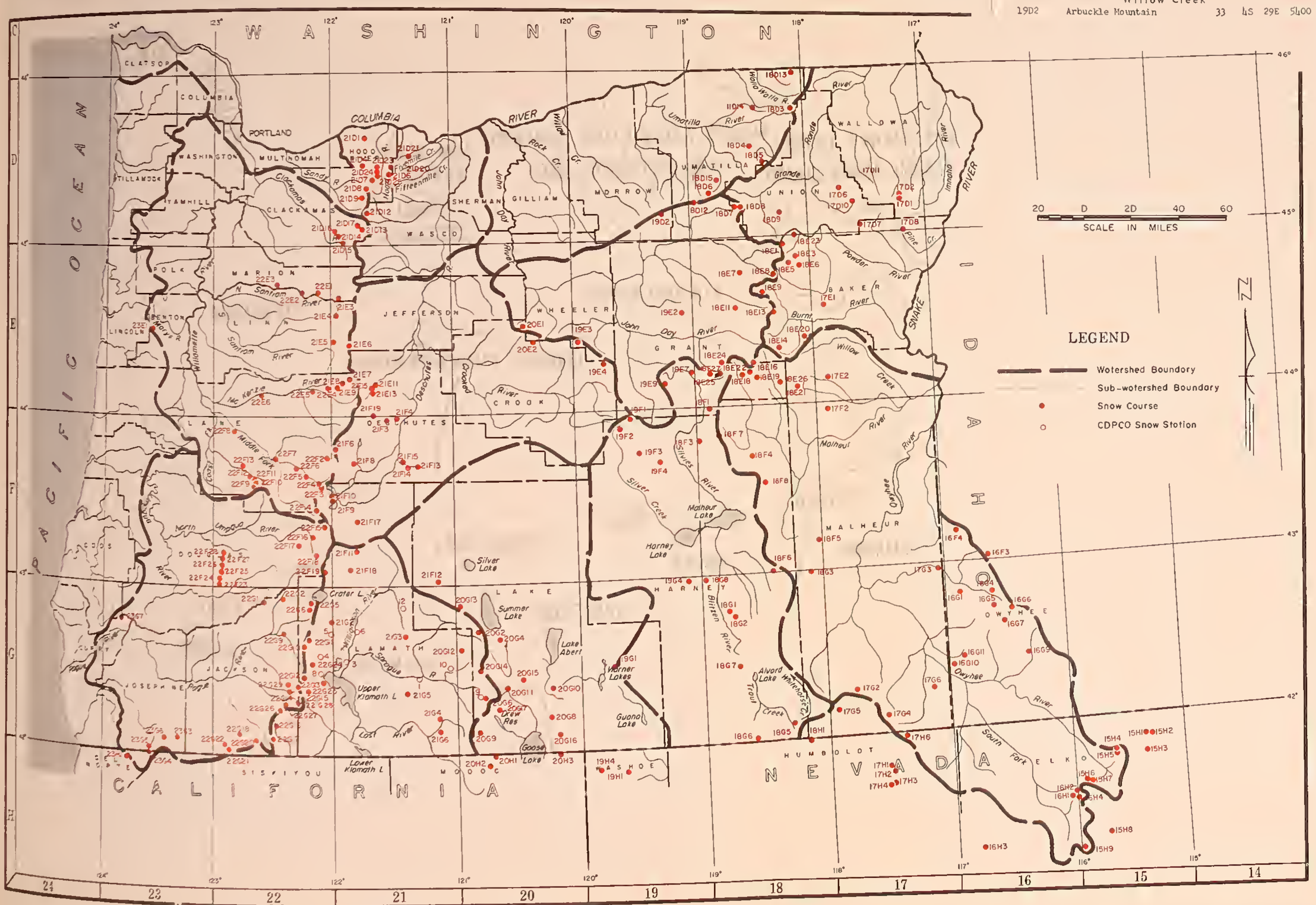
Number	Name	Sec.	Twp.	Rge.	Elev.
18G6a	Denio Creek	14	41S	34E	6000
18H1	Disaster Peak (Nev)	8	47N	34E	6500
17G5a	Oregon Canyon	9	40S	40E	6950
18G5a	Trout Creek	10	41S	38E	7800

Harney Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
18G8	Buckskin Lake	Unsurveyed			
19G4	Foster Flat	Unsurveyed			

LEGEND

1902	SNOW COURSE ONLY
1902M	SNOW COURSE AND SOIL MOISTURE
1902MA	SNOW COURSE SOIL MOISTURE AND AERIAL MARKER
1902A	SNOW COURSE AND AERIAL MARKER
1902●	SOIL MOISTURE ONLY
1902•	AERIAL MARKER ONLY



Map and Index to OREGON SNOW COURSES

7-5-19101-0

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE [illegible] M-1874

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon Agricultural Experiment Station
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES

- California-Pacific Utilities Company
- Pacific Power and Light Company
- Portland General Electric Company
- The California Oregon Power Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROSS BLDG., 209 S.W. 5TH AVE.
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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"